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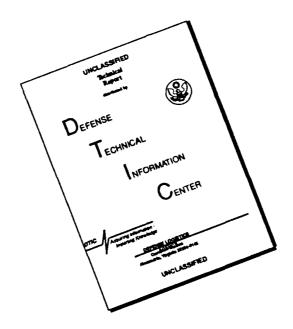
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QUALIFICATION TESTING OF THE CNU-480/E CONTAINER FOR THE SMAW(HEAA) ROCKET

HQ AFLC/DSTZT
AIR FORCE PACKAGING EVALUATION AGENCY
WRIGHT-PATTERSON AFB, OH 45433-5999
December 1990

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PROJECT NO. 90-P-105

TITLE: Qualification testing of the CNU-480/E Container

**ABSTRACT** 

The objective of this test series is to qualify the CNU-480/E SMAW High Explosive Anti-Armor(HEAA) rocket container for production release by MSD/YJA. The CNU-480/E container is a welded aluminum, controlled breathing style with a removable cover. The container is designed to hold four HEAA rockets in two layers constrained in conformal cavities in polyethylene tray and cover cushions. The qualification test series is derived from MIL-STD-648A and FED-STD-101C and consists of -25 and +140 F free fall drop tests, sinusoidal and repetitive shock vibration tests, structural strength tests, and leak tests. The test series was performed at the Air Force Packaging Evaluation Activity, Wright-Patterson AFB, Ohio.

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#### INTRODUCTION

The objective of this test series is to qualify the CNU-480/E container for production release by MSD/YJA. The tests performed are specified by MSD/YJA, Eglin AFB, FL in the Test Plan (Attachment 1) and are derived from MIL-STD 648A and Fed-Std-101C. The test methods constitute both procedure for performing the tests and performance criteria for evaluating container acceptability. The tests are commonly applied to special packaging containers providing shock and vibration protection to sensitive items. The facilities at which the tests were performed are located at the Air Force Packaging Evaluation Activity, Wright-Patterson AFB, OH.

#### ITEM DESCRIPTION

The CNU-480/E container is a welded aluminum, controlled breathing style with a removable cover. Container sides are fabricated from double walled aluminum extrusions. Top and bottom are aluminum sheet. Closure is achieved by four toggle mechanism latches. Shock and vibration isolation is provided by polyethylene foam cushions fabricated from sheet to form two trays and a cover. The container is designed to hold four high explosive anti-armor SMAW (HEAA) rockets in two layers constrained in conformal cavities in the trays and cover. Exterior dimensions are length 46.5 inches, width 20.5 inches, and depth 15.5 inches. Loaded gross weight is 136 pounds. The container tested and the four HEAA rockets were provided by MSD/YJA.

#### INSTRUMENTATION

The upper starboard and lower port rockets were instrumented with triaxial piezoelectric accelerometers located on the protective plastic nose cover. The accelerometer location was 3 inches from the cover forward end, 1/2 inch above the rocket centerline, and 2 inches offset transversely from the rocket centerline and toward the container interior. Accelerometer principal axes were aligned parallel and perpendicular to the rocket centerline. With respect to container faces, the accelerometer principal axes were perpendicular to the faces in the following table:

Cont	ainer Face	Accelerometer	Axis and Channel	Identification
Iden	ntification	Axis	Upper Starboard	Lower Port
1	Тор	Vertical	1	6
2	Port	Transverse	3	7
3	Bottom	Vertical	1	6
4	Starboard	Transverse	3	7
5	Forward	Longitudinal	2	5
6	Aft	Longitudinal	2	5

The accelerometer output was amplified by an Endevco model 2740B charge amplifier. The signal was recorded and processed by a GHI Systems Triads II E data acquisition system. Prior to test, the system calibration was determined to be within ± 5 percent of input by inserting a known charge into each charge amplifier and then reading the associated Triads II E channel response. As a final product, the Triads II E printed graphic amplitude-time traces with computed resultant of the orthogonal components and peak accelerations of both resultant and components.

#### TEST EOUIPMENT

The following instrumentation and equipment were used in this test:

Item	Manufacturer	Model	Serial	Cal	Ехр.
Data Acquisition Sys Charge Amplifier Accelerometer Accelerometer Vibration Meter Vibration Machine Storage Oscilloscope Test Cham -40, 165 F Test Cham -100, 375 F Manometer, 0-60 in H <sub>2</sub> O	GHI Systems Endevco Endevco Endevco Endevco Endevco Endevco Endevco Endevco L.A.B. Div. L.A.B. Div. Tektroniks Envirotronics Tenney Eng Meriam Inst.	41012 5000-96B 5115 s	M00914451 FW28 FW10 FY65 FW07 FY49 FW23 FE97 FE53 0068 89003 56801 B094122 A088843 BH1138 154591	25 De N/A N/A 7 Oc 4 Au 25 No N/A	t 90 v 90 g 90 g 90 g 90 r 91 r 91 c 90 t 90 g 91
Halogen Leak Detector Vacuum Pump	General Elec Precision	42081	9M09	N/A	
Drop Test Machine Dynamometer Dynamometer Scale 2000 lbs.	L.A.B. Div. WC Dillon & C Chatillon Howe	20 5000 160	AN20058 A082647 A057229	25 Se 21 Ju 4 De	

## TEST PROCEDURE

The containers with the four HEAA rockets as provided by MSD/YJA were tested in accordance with the MSD/YJA test plan and referenced methods of MIL-STD 648A and Fed-Std-101C, except as stated herein. All leak tests were performed with the four HEAA rockets and two polyethylene cushion trays removed because either the polyethylene or rockets absorbed compressed air and thereby interfered with the test. For Fed-Std-101C, Method 5019.1, the container was vibrated on the bottom, port, and aft faces for one hour per face instead of on all six faces for thirty minutes per face because other orientations would have interfered with the accelerometers due to lack of clearance.

#### CONCLUSIONS AND RESULTS

## Test Sequence 1, MIL-STD-648A, 5.1.2, Form and Fit Test.

The four rockets were removed from the fully assembled closed CNU-480/E container at room temperature in 21 seconds without adverse impediments or the use of tools by two personnel. The four rockets were returned to the container which was assembled and closed without unreasonable difficulty. The CNU-480/E container complies with the requirements of 5.1.2 and the requirement that total breakout time shall not exceed 4 man-minutes.

# Test Sequence 2, Fed-Std-101C, Method 5009.1, Leaks in Containers, 6.3, Pneumatic Pressurization Technique.

The CNU-480/E container without the four rockets and two polyethylene trays incurred a leak rate of 0.00 psi per hour when pressurized to 1.5 psig internal pressure for two hours. The CNU-480/E container complies with the requirement that the maximum leak rate shall not exceed 0.050 psi per hour.

# <u>Test Sequence 3, MIL-STD-648A, 5.3.2, Resonance Strength and Dwell Test, -25 Degrees Fahrenheit.</u>

Post-test inspection indicated that neither the CNU-480/E container nor the four rockets incurred damage detectable by visual inspection. The rockets were adequately constrained without shifting or rotation by the polyethylene trays. Resonant transmissibility is reported in Appendix 3, but no performance requirement is stated in the Test Plan. The CNU-480/E container complies with the requirements of 5.3.2.

# <u>Test Sequence 4, MIL-STD-648A, 5.3.2, Resonance Strength and Dwell Test, +140 Degrees Fahrenheit.</u>

Post-test inspection indicated that neither the CNU-480/E container nor the four rockets incurred damage detectable by visual inspection. The rockets were adequately constrained without shifting or rotation by the polyethylene trays. Resonant transmissibility is reported in Appendix 3, but no performance requirement is stated in the Test Plan. The CNU-480/E container complies with the requirements of 5.3.2.

#### Test Sequence 5, Examination.

Visual inspection of the container, cushion pads, and rockets indicated:

- a. The four rockets were as initially positioned and undamaged.
  - b. The cushion trays were undamaged.
  - c. Container closure latches were closed.
  - d. No visible cracks in container welds were present.
  - e. No apparent damage to the container was present.

# Test Sequence 6, Fed-Std-101C, Method 5009.1, Leaks in Containers, 6.3, Pneumatic Pressurization Technique.

Initially, the CNU-480/E container without the four rockets and two polyethylene trays incurred a leak rate of 0.079 psi per hour when pressurized to 1.5 psig internal pressure for 30 minutes. As removal of the rockets and trays may have caused closure gasket contamination with powdered polyethylene, the gasket and mating surfaces were carefully cleaned. Retest indicated a leak rate of 0.0036 psi per hour at 1.5 psig for 30 minutes. The CNU-480/E container complies with the requirement that the maximum leak rate shall not exceed 0.050 psi per hour.

# Test Sequence 7, Fed-Std-101C, Method 5019.1, Vibration (Repetitive Short) Test.

After 1 hour vibration at 4.5 Hz and 1.0 inch DA input for the bottom and port side faces and at 4.8 Hz and 1.0 inch DA input for the aft end face, post-test inspection indicated that no damage was incurred by the container, cushioning, or rockets. All closure latches remained closed. The four rockets did not shift or rotate. Acceleration response levels of the rockets are listed in Appendix 3. The container complies with the performance requirements implied by Method 5019.1.

# Test Sequences 8 and 9, Fed-Std-101C, Method 5007.1, Free Fall Drop Test, 6.3, Procedure G, +140 Degrees Fahrenheit.

After conditioning at +140 degrees Fahrenheit for 24 hours, the container received 18 inch free fall drops at +140 degrees Fahrenheit on two diagonally opposite corners, the base, and port side. Only minor deformation resulted on impacted corners. The rockets did not shift or rotate. Closure latches remained closed. Neither the container, cushion trays, nor the rockets incurred damage. Rocket acceleration responses are listed in Appendix 3 and excessively exceeded the values obtained by MSD/YJA for ambient temperature drop testing of the old style wood container with 5 SMAW rockets and similar cushion trays designed for 3 SMAW rockets each. One of the acceptability criteria imposed by MSD/YJA is that the new aluminum CNU-480/E

container not exceed the drop test peak accelerations of the old style wood container so that performance equivalence of the two containers could be established.

# Test Sequences 10 and 11, Fed-Std-101, Method 5007.1, Free Fall Drop Test, 6.3, Procedure G, -25 Degrees Fahrenheit.

After conditioning at -25 degrees Fahrenheit for 24 hours, the container received 18 inch free fall drops at -25 degrees Fahrenheit on another set of diagonally opposite corners, top, and forward end side. Only minor deformation resulted on impacted corners. Drops did not cause weld cracks or holes in the container. The rockets did not shift or rotate. Closure Neither the container, cushion trays, latches remained closed. nor the rockets incurred damage. Rocket acceleration responses are listed in Appendix 3 and excessively exceeded the values obtained by MSD/YJA for ambient temperature drop testing of the old style wood container with 5 SMAW rockets and similar cushion trays designed for 3 SMAW rockets each. One of the acceptability criteria imposed by MSD/YJA is that the new aluminum CNU-480/E container not ovceed the drop test peak accelerations of the old style wood container so that performance equivalence of the two containers could be established.

# Test Sequence 12, Fed-Std-101C, Method 5009.1, Leaks in Containers, 6.3, Pneumatic Pressurization Technique.

The CNU-480/E container without the four rockets and two polyethylene trays incurred a leak rate of 0.029 psi per hour when pressurized to 1.5 psig internal pressure for 1.25 hours. The CNU-480/E container complies with the requirement that the maximum leak rate shall not exceed 0.050 psi per hour.

#### Test Sequence 13, Examination.

Visual inspection of the container, cushion trays, and rockets performed prior to the leak test indicated:

- a. The four rockets were as initially positioned prior to the drop tests and undamaged.
  - b. The cushion trays were undamaged.
  - c. All container latches were closed.
- d. No visible cracks in container welds or holes were present.
  - e. No damage to the container was present.

Test Sequence 14, Fed-Std-101C, Method 5016.1, Superimposed Load Test.

When loaded with a stacking load of 3063 pounds uniformly distributed over dunnage on the container top for 1 hour and 7 minutes at ambient temperature, the CNU-480/E container incurred no damage or permanent deformation. Dimensional test data is listed in Appendix 3. The four rockets inside incurred no damage. The container remained functional; therefore, it complies with the implied performance requirements of Method 5016.1.

# Test Sequence 15, MIL-STD-648A, 5.8.3, Hoisting Fittings Strength Test.

With a uniformly distributed load of 542 pounds centered on the container top, the container was hoisted by straps attached at two points on each of the two handles for 10 minutes. Post-test inspection indicated no damage or deformation of the container. The container complies with the performance requirement implied by 5.8.3.

# <u>Test Sequence 16, MIL-STD-648A, 5.8.5, Single Hoisting Fitting Strength Test.</u>

The container was hoisted by straps attached at two points on the aft handle for 5 minutes, and then by the forward handle for 5 minutes. Post-test inspection indicated no damage or deformation of the container. The container complies with the performance requirement implied by 5.8.5.

#### Test Sequence 17, MIL-STD-648A, 5.4.8, Tiedown Strength Test.

The CNU-480/E container was placed on a plywood base supported by orthogonal rollers bearing in a horizontal steel welding table. The container was secured by the two base handles with chain, so that four point loading with the angle of restraint being 45 degrees from the horizontal and 45 degrees outboard from the container surface resulted. A forward directed tensile load of 410 pounds and a lateral tensile load of 200 pounds was applied to the container base along the respective centerlines for 2 minutes. The container was rotated 180 degrees and an aft directed tensile load of 450 pounds and a lateral tensile load of 204 pounds was applied to the container base along the respective centerlines for 1 minute. Post-test inspection indicated no damage or deformation of the container. The CNU-480/E container complies with the performance requirements implied by 5.4.8.

# Test Sequence 18, Examination.

Visual inspection of the container, cushion trays, and rockets performed after the tiedown strength test indicated:

- a. The four rockets did not shift or rotate or incur damage.
- b. The cushion trays were undamaged.
- c. All container latches were closed.
- d. Container welds were not cracked or broken.
- e. Minor deformation of drop test impacted corners was present.
- f. No visibly apparent damage to the container that would impair functionality was present.

# Test Sequence 19, Fed-Std-101C, Method 5009.1, Leaks in Containers, 6.3, Pneumatic Pressurization Technique.

The CNU-480/E container without the four rockets and two polyethylene trays incurred a leak rate of 0.036 psi per hour when pressurized to 1.5 psig for 1 hour. The CNU-480/E container complies with the requirement that the maximum leak rate shall not exceed 0.050 psi per hour.

## Test Sequence 20, MIL-SID-648A, 5.5.2, Structural Integrity Test.

The loaded CNU-480/E container was pressurized to +2.0 psig for 15 minutes, then it was depressurized to a vacuum of -1.5 psig for 15 minutes. Post-test inspection indicated that the container incurred no failure of closure latches or gasket, damage, or deformation sufficient to prevent removal of the contents. The CNU-480/E container complies with the performance requirement implied by 5.5.2.

## Test Sequence 21, TP-HEA-008, Transportation Drop Test.

The fully loaded CNU-480/E container was dropped from 7 feet onto a concrete floor so that its base impacted parallel to the floor. Visual inspection indicated that neither the container, cushion trays, or rocket incurred damage. The rockets remained as initially positioned. All latches remained closed and could be freely opened. No weld cracks or holes were visually apparent. Minor but not critical deformation of corner 2-3-6 resulted. The CNU-480/E container complies with the performance requirement implied by the 7 foot Transportation Drop Test.

Test Sequence 22, Fed-Std-101C, Mcthod 5007.1, Free Fall Drop Test, 6.3, Procedure G, Ambient Temperature.

To develop valid acceptability criteria, the CNU-480/E container was given the drop test of test sequences 8,9,10, and 11 at ambient temperature so that similar drop test data for the old SMAW wood container could be reasonably compared with the CNU-480/E container drop test data. Test parameters drop height 18 inches, temperature ambient, and acceleration data low pass filter frequency 125 Hz for both data sets are then identical. As the 125 Hz -3 db low pass filter frequency is considered too low to adequately pass the drop test complex acceleration pulse, the CNU-480/E drop test data was also filtered at a low pass filter frequency of 290 Hz - db. For the CMU-480/E container, the drop test complex acceleration pulses contain superposed components of 120 to 125 Hz which were the rotational suspension modes of the rocket about the vertical and transverse axes and of 111 to 125 Hz which were the circumferential or radial vibration modes of the launcher tube. To a lossor degree, the old style wood container drop test data also contained these superposed components: therefore, selected large amplitude drop pulses were also filtered at a low pass filter frequency of 290 Hz -3 db. Relative comparison of the four sets of ambient temperature drop test data was made.

For the CNU-486 drop test data, less difference between -25 degrees Fahrer t. ambient, and +140 degrees Fahrenheit data was observed the was expected. The large peak amplitude and lack of temperature dependence of the CNU-180/E data is attributed to the dominant suspension rotational modes of the rockets which are strongly coupled with one another and with the launcher tubes coincident 111 to 125 Hz circumferential or radial modes. mechanical system containing strongly coupled multiple resonant modes of approximately the same or harmonically related resonant frequencies is extremely response sensitive to initial conditions and excitation. While the old style wood container drop test data exhibited are coupled resonant response, the coupling was less and the reconances not so sharply tuned; therefore, the peak accelerations were less. Irrespective of how filtered, CNU-400/E ambient temperature drop test data excessively exceeded the peak acceleration response of the old style SMAW wood container ambient temperature drop test data. The CNU-480/E container does not provide as much shock isolation protection to the SMAW(HEAA) rockets as does the old style wood box container. As no acceleration fragility ratings are available for the SMAW(HEAA) rocket, comparing item drop test response to its fragility rating can not be used as an evaluation criteria for the CNU-480/E container.

## RECOMMENDATIONS

In order to establish performance equivalence, MSD/YJA imposed the acceptability criteria that the CNU-400/E container drop test

peak acceleration must not exceed corresponding values for the old style wood container. For at least two drops, the bottom and port side, CNU-480/E ambient temperature drop test peak acceleration filtered at 125 Hz low pass unacceptably exceeded corresponding values for the old style wood container. As cushioning drop test data is temperature dependent, error due to the difference induced by the temperature difference will result when two drop test data sets are compared. CNU-480/E, +140 degrees Fahrenheit drop test peak acceleration filtered to the same low pass filter frequency for the bottom and port side drops also unacceptably exceeded ambient temperature values for the old style wood container. While at different test temperature and low pass filter frequency which are factors tending to relatively increase the differences, all values of CNU-480/E -25 degrees Fahrenheit drop test peak accelerations unacceptably exceed the ambient temperature values for the old style wood container. to the large magnitudes of the drop test peak accelerations and the obvious presence of multiple strongly coupled suspension resonant modes tending to peak acceleration response, DSTZT recommends additional effort be made to reduce CNU-480/E container drop test peak accelerations to the levels of the old style wood container. Peaking acceleration responses can readily be reduced by detuning and decoupling the suspension resonant modes of the four rockets. To decouple suspension resonant modes, DSTZT recommends that the rockets currently with centerlines lying in a vertical plane be staggered in the container width dimension so that at least 2 inches separates the vertical planes containing a rocket centerline. To detune suspension and launcher tube resonant modes, DSTZT recommends that the cushioning material bearing on the launcher tube be undercut for a distance of .26 times the launcher tube length from the launcher tube aft end to provide 1/4 inch clearance between the launcher tube and the cushion material.

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APPENDIX 1
TEST PLAN

#### TEST PLAN

## High Explosive Anti Armor (HEAA) Rocket Shipping and Storage Container (CNU-480/E)

## 1.0 OBJECTIVE

The objective of these tests is to qualify the CNU-480/E Container for production release. The tests specified herein are in compliance with Specification Number SP8982830.

## 2.0 DESCRIPTION

The container is a welded-aluminum, controlled-breathing style with a removable cover. It is designed to hold four, high explosive anti-armor (HEAA) rockets. Shock vibration isolation is provided by polyethylene foam cushions. The container is 46 X 20.5 X 16 with a gross weight of 135 pounds.

## 3.0 PASS/FAIL CRITERIA

The pass/fail criteria for the following tests will be in accordance with the referenced test method, unless otherwise specified.

## 4.0 TEST SEQUENCE NUMBER AND DESCRIPTION

Unless otherwise specified, the sequence of the tests will be as specified in Table I. The YJEM test engineer may authorize deviations to expedite the test series.

## 5.0 INSTRUMENTATION

Instrument the lower port rocket and the upper starboard rocket each with a triaxial accelerometer, positioned on the rocket container cap. Capture and record each shock and vibration response during the test series.

## 6.0 TEST FACILITY AND REPORT

The tests, as listed in Table I, will be conducted by the Air Force Packaging and Evaluation Agency (AFPEA). A published test report will be prepared and submitted to the Packaging Engineering Division (YJEM), Eglin AFB FL, within 60 days after test completion. The report will contain, but is not limited to, tests conducted, criteria, test set-up (with photographs or illustrations, as appropriate), tests conditions, and pass/fail analysis (with photographs, as appropriate).

TABLE I
TEST SEQUENCE NUMBER AND DESCRIPTION

SEQ.	DESCRIPTION	STD	METHOD/ PARA	TEMP O <sub>F</sub>
1	FIT TEST: Load container with four HEAA rockets. There can be no fit or assembly problems. Open and unload a fully loaded container using a two man crew. Total breakout time shall not exceed 4 man-minutes.	MIL-STD-648A	5.1.2	AMB.
2	LEAK TEST - Pressurize to 1.5 psig and monitor loss for 15 min. If no loss, terminate test. If loss, continue for a total time of 60 min. Maximum loss is not to exceed .040 psig.	FTMS-101C	5009.1 6.3	AMB.
3	VIBRATION - Perform three sweeps on the three major axes as follows: Sweep 5 to 50 Hz at .5 oct/mai. Input levels are 5-12.5 Hz .125 inch D.A. and 12.5-50 Hz 1.0g. Locate and dwell at the peak resonance for 10 min. Total test time shall be 30 min.	MIL-STD-648A	5.3.2	-25
4	VIBRATION - Perform three sweeps on the three major axes as follows: Sweep 5 to 50 Hz at .5 oct/min. Input levels are 5-12.5 Hz .125 inch O.A. and 12.5-50 Hz 1.0g. Locate and dwell at the peak resonance for 10 min. Total test time shall be 30 min.	MIL-STD-648A	5.3.2	+140
5	EXAMINATION - Inspect container and contents for damage.	N/A	N/A	AMB.
6	LEAK TEST - Same conditions as Test No. 2.	FTMS-1010	5009.1 6.3	AMB.

TABLE I (cont'd)
TEST SEQUENCE NUMBER AND DESCRIPTION

SEQ.	DESCRIPTION	STO	METHOD/ PARA	TEMP Og
,	100% CARGO VIBRATION - 1.3 to 1.5q at 5.5 Hz for 3 hours. At the end of each half-hour period turn the package to test on a different face, so that at the end of the three-hour period the test item will have been tested on each of its six faces.			
8	CORNERWISE DROP (FREE FALL) TEST - Two diagonally opposite corners at 18 inches. Level A protection.	FTMS-101C	5007 6.3 Procedure G	+140
9	FLAT DROP (FREE FALL) TEST - Flet drop on container base and one adjacent side at 18 inches. Level A protection.	FTMS-101C	500? 6.3 Procedure 6	+140
10	CORNERWINE DROP (FREE FALL) TEST - Same conditions as No. 3 with remaining corners.	FTMS-101C	5007 6.3 Procedure G	-25
11	FLAT DROP (FREE FALL) TEST - Flat drop on containor top and any adjacent side offer than in lest No. 9.	FTMS-101C	5007 6.3 Procedu o G	·-25
12	LEAK TEST - Same conditions as Test No. 1.	FTMS-1010	5009.1 6.3	AMB.
13	EXAMINATION - Inspect container and contents for damage.	N/A	N/A	AMB.
14	SUPERIMPOSED-LOAD TEST - Load container to 3,038 pounds.	FTMS-101C	5016.1	AM8.
15	HOL TING FITTING STRENGTH FEST - Place a 540 pound load on the loaded container, lift off the floor using the two handles and hang for 5 minutes. There can be no permanent deformation or damage.	MIL-STD-648A	F.H. 3	AMB.

TABLE I (cont'd)

TEST SEQUENCE NUMBER AND DESCRIPTION

SEQ. NO.	DESCRIPTION	STD	METHOD/ PARA	remp o <sub>e</sub>
16	SINGLE HOISTING FITTING STRENGTH TEST	MIL-STD-648A	5,8,6	AMB.
17	TIEDOWN STRENGTH TEST: Secure the container using the two base handles, so that four point loading is used. The angle of restraint shall be 450 from the horizontal and 450 outboard from the container surface. Apply the following loads for I minute. There shall be no damage or permanent deform tion.	MIL-STD-648A	5.8.4	AMB.
	Forward 405 minds Lateral 200 bunds			
18	EXAMINATION - Inspect container and contents for damage.	N/A	N/A	AMB.
19	LEAK TEST - Same conditions as Test No. 2.	FTMS-101C	5009.1 6.3	AMR.
20	STRUCTURAL INTEGRITY TEST: Apply a pressure of +2.0 psig and a vacuum of -1.5 psig to the container. There shall be no damage or permanent deformation.	MTL-STD-648	5.5.2	AMR.
21	TRANSPORTATION DROP - 7 feet onto container bace.	TP-HF A-008		AMR

APPENDIX 2

FIGURES

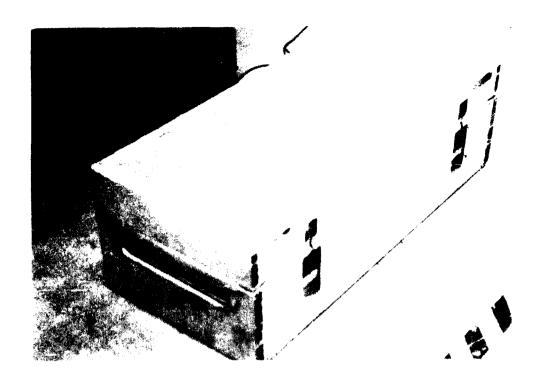


Figure 1. CNU-480/E Container.

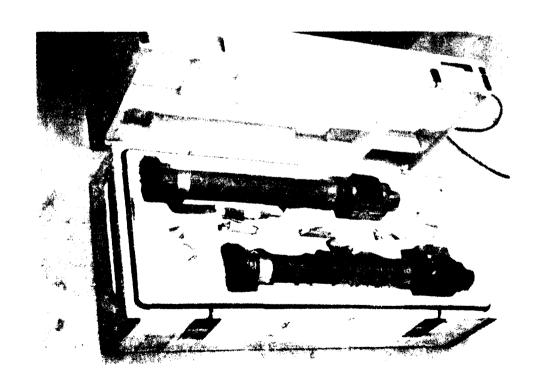


Figure 2. CNU-480/E Container. Upper HEAA Rocket Tier.



Figure 3. CNU-480/E Container. Lower HEAA Rocket Tier.

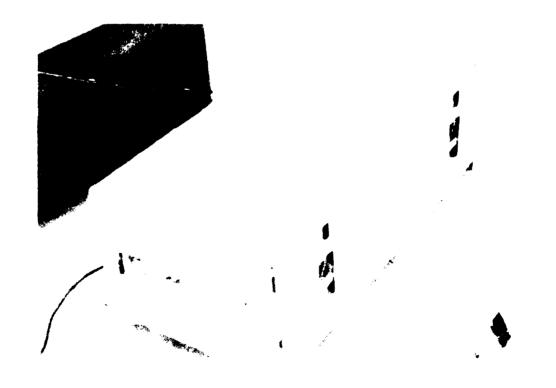


Figure 4. Leak Test and Structural Integrity Test.

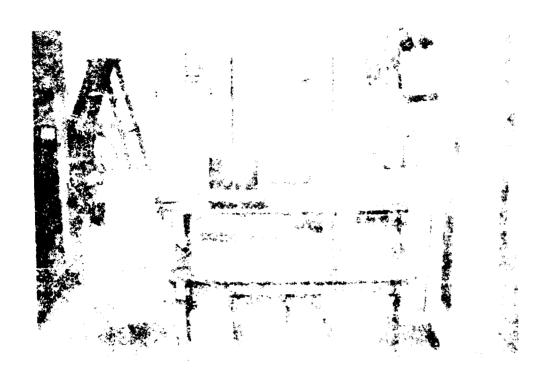
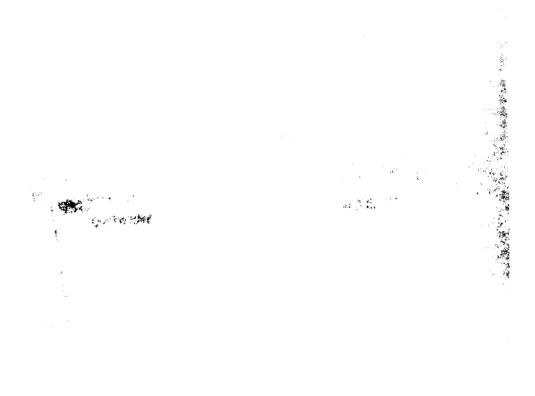


Fig. System, That the Control

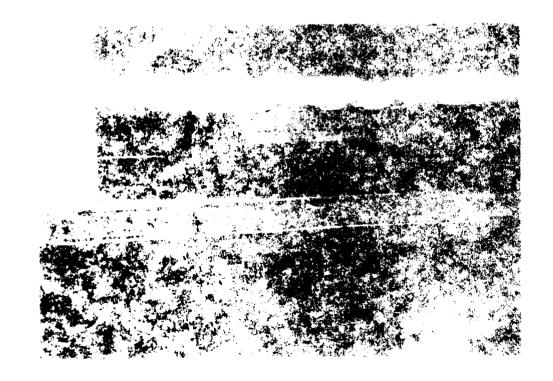
Com



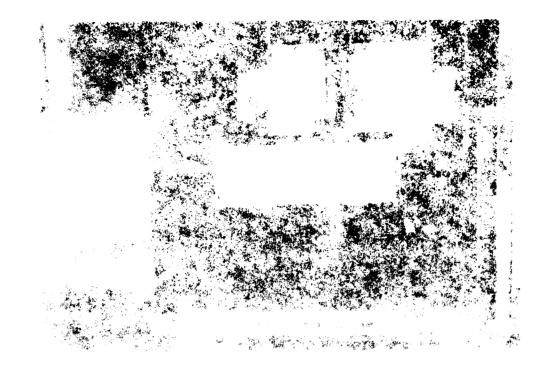
Fig. . The second seco







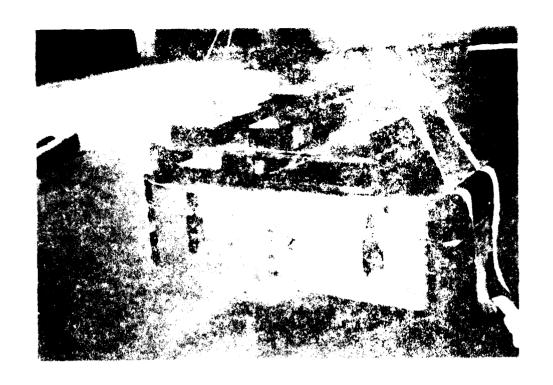
. ottom Face.



Pict Drop on Base.



 $p^{i}(i)$  ,  $\dots$ 



Pigure 11. Horning Fittle Compar Test.

Figure 12. The way the William Fifting Strongth Test

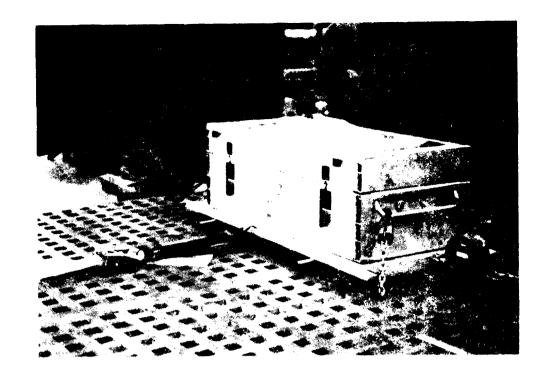


Figure 13. Tiedown Strength Test.



Figure 14. 7 Foot Transportation Drop Test.

APPENDIX 3

TEST DATA

Leaks in Containers, Method 5009.1, Pneumatic Pressurization Technique. Test Sequence 2, Fed-Std-101C,

Leak Rate Psi Per Hour	0.0072
Test Pressure In Water (psig)	45.1 (1.63) 44.9 (1.62) 45.1 (1.63)
Test Time Minutes	0 0 0

Resonance Strength and Dwell -25 Degrees Fahrenheit. 5.3.2, MIL-STD-648A, Test Sequence 3, Resonance Dwell

Port Trans		 	6.8	10.7
Response Lower Accel	Gbb	6.6	13.5	18.2
Resonant Reer Stbd		5.4	9.0	10.5
Res Upper	ddb	8.8	17.2	17.8
ut Accel	Gpp	2.0 1.98 1.98	000	7.1
Table Input q Disp	In DA	1 1 1	1 1 1	.125
Ta) Freq	HZ	16.1 16.1 16.1	15.0 15.0	11.5
Time	Min	, 9 10	2 9 10	28.0
Container Axis		Vertical Vertical Vertical	Transverse Transverse Transverse	Longitudinal Longitudinal

Note: Prior to resonance dwell, each container axis was swept over the frequency range 5-50 Hz at a rate of 2 minutes per octave for 7.5 minutes with an input of 0.125 inches DA from 5 to 12.5 Hz and 1.0 Gp from 12.5 to 50 Hz.

## Waveform Test Report AFPEA, HQ AFLC/DBTZ. TRIAD II-E

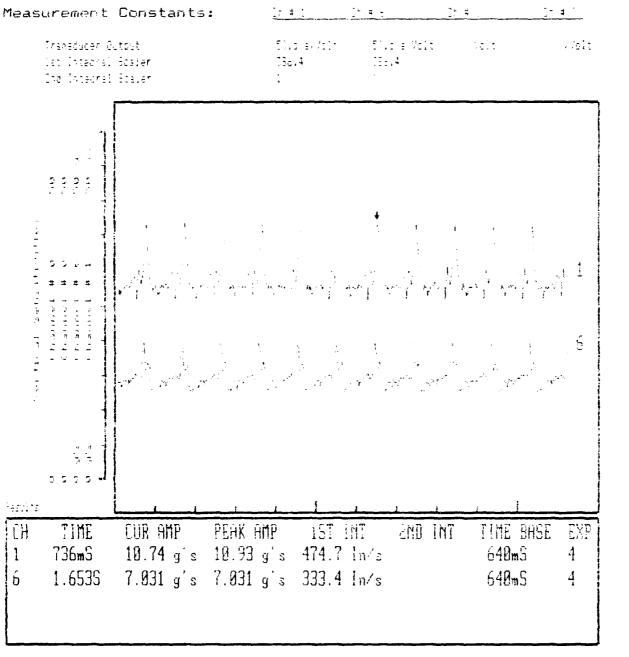
Test Ident: AF	F PACKAGING EVA	AL AGENCY	Date o	f Test: 00	3-17-1990
Measurement Co	onstants:	<u> </u>	<u> </u>		<del></del>
Transducer Dutcu Set Ontechal Sca Onc Ontechal Sca	, <u>,                                  </u>	₹ 32 € 30.5 07624	51.0 s volt 136.4 1		41.5
Cleaning H with the Company of the Company H with t					
1 1.3065 8	UR AMP PEAK AM .789 g's 9.960 g .6 <b>40</b> g's 6.835 g	's 303.3 In	n/s	TIME BASE 640mS 640mS	EXP 4 4

## Remarks

High Explosive Anti-Armor Rocket Shipping and Storage Container CNU-480 E), MIL-670-648, 5.3.2 Resonance strength and dwell test. Temperature -25 F. Input: Acceleration 1.0 Do. Frequency (6.1 Hz. Response: Do.1 - Opper Starboard, Ch.6 - Lower Port. Vertical House, Time 4 Milites. Resonance Owell.

# Waveform Test Report AFPEA, HO AFLC/DSTZ, TRIAD II-E

Test	Ident:	AF	PACKAGING	EVAL	AGENCY	Date	σ÷	Test:	08-1	7-19	90



#### Remarks

High E-plosive Anti-Arnar Rocket Shipping and Storage Container (CNU-46).Ex. Mil-STD-543. 5.3.2 Resonance strength and dwell test. Resonance Dewill, Time P Minutes. Temperature -25 F. Irout: Acceleration .99 Sp. Frequency 16.1 Hz. Resonance: Child Dependance. Child Lower Port. Jertical Axis.

## Waveform Test Report AFPEA, HG AFLC/DS17, TRIAD II-6

	AF PACKAGING EV Constants:	нь новы : - <u></u>		
i a elliet . el . e les l'est	. Bukug	*		.:
				( C)
		A Company of the second of the		
		g's 915.2 In/s	2ND INT TIME 640m 640m	i

Remarks

migh Biblosive Acti-Armor Rocket Shipping and Storage Container (DNC-480 St. MICH870-848, F.T.2 Resolutive Strength and Ower1 test. Resonance Dwell, Time 2 Minutes. Transverse Rigu. Transverse Fig., Transverse

# Waveform Test Report AFPEA: HQ AFLC/D872, TRIAD II-E

Test Ident:	AF PACKAGING EV	AL AGENCY	Date o	+ Test: 08	3-23-1990
Measurement	Constants:	- 4 -	]% <b># 7</b>	<u> </u>	<del>1</del> '/
Transducer 3 ist Integral Inc Integral	Boaler	50.p = 7051t 785.4 1	50-2 e 2015 794.4 1	velt.	ve.t
Vertical Secondaries  Channel # v Su Su Shannel # 7 Su Su Si					
2222	Madalak pada a pada 4 pada Pada Començarian mengerangan			r Valenda († 1864) Vilonia († 1865) Vilonia († 1865)	
CH TIME 3 340.4mS 7 344.3mS	CUR AMP PEAK AM 17.96 g's 18.55 g 15.23 g's 15.23 g	y's 1112. I	n/s	TIME BASE 640mS 640mS	EXP 4 4

## Remarks

High Explosive Anti-Armor Rocket Shipping and Storage Container (CNU-480/E), MIL-STD-648, S.C.2 Resonance strength and dwell test. Resonance Dwell. Time 7 Minutes. Transverse Axis. Temperature -25 F. Input: Acceleration 1.0 Bo. Fraquency (5.0 Hz. Response: On 3 - Jopen Stanboard, Ch 7 - Lower Port.

# Waveform Test Report

Test Ident: AF PACKAGING EVAL AGENCY Date of Test: 08-24-1990						
Measurement	Constants:	<u> </u>	35 # E	,- <u> </u>	<u> 25 # )</u>	
Trensducen () 1st Integnal Bro Integnal	Scaler	51.g s velt 785,4 1	Elve s veit TEBV4 1	Neit	veit.	
2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.00			<b>†</b>			
Contraction of the state of the						
Segults			gan gan gan gan gan g	yma yma	¥* , 5	
CH TIME 2 459.5mS 5 459.5mS	17.18 g's 17	EAK AMP 1ST 7.38 g's 645.5 8.75 g's 779.0		TIME BA 640mS 640mS	ISE EXP 4 4	

## Remarks

High Explosive Anti-Armor Focket Shipping and Storage Container (CNU-430 E) MIL-STD-543, 5.7.2 Resonance strength and dwell fest. Resonance Owell. Time 1.5 Minutes, Longitudinal Axis, Temperature -25 F. Inout: Displacement 0.125 In DA. Frequency 11.5 Mz. Resconse: Ch 2 - Epper Starboard, Ch 5 - Lower Fort

# Waveform Test Report

Test loent: AF PACHAGING EVAL + GENCY Date of Test: 08-24-1990

Measurement	Constants:	<u> 25 # 2                                </u>	<b>\$</b> 5	# 1 25 # <u>1</u>
Thankoussan I Sat Intepnal In Integnal	. Juaier	50.51677615 786.4 1	Elve a velt Zab.4 1	rValt rvalt
Provide a property of the control of				2
				5
1H TIME 11 428.8m5 5 427 5mS	CUR AMP PEAK AM 13.28 g/s 13.86 g 14.25 g/s 14.84 g	's 514.7 In	∕s	TIME BASE EXP 640mS 4 640mS 4

#### Remarks

High Explosive Anti-Armor Rocket Shipping and Storage Container (CNU-480/E), MIL-STD-548, 5.3.2 Resonance strength and dwell test, Resonance Dwell, Time 3 Minutes, Longitudinal Aris, Temperature -25 F, Input: Displactment 0.125 In DA. Frequency 10.1 Hz. Response: Ch 2 - Upper Starboard, Ch 5 - Lower Port.

Test Sequence 4, MIL-STD-648A, 5.3.2, Resonance Strength and Dwell Test, Resonance Dwell, +140 Degrees Fahrenheit.

		Tab	Table Input	ι	Res	Resonant Response	sponse	
Container Axis	kis Time	Freq	Disp	Accel	Upper Stbd Accel Tra	Stbd Trans	Lower	Port Trans
Vertical	1	11.5	.125	1.7	11.1	6.5	16.0	9.4
Vertical	6	11.5	.125	1.7	11.3	9.9	14.5	8.5
Vertical	10	11.5	.125	1.7	!	1	1	t I
Transverse	2	12.1	1	1.96	10.5		23.0	11.7
Transverse	10	11.6	.125	1.7	<b>!</b>		1	}
Longitudinal	1.5	12.6	1	2.0	6.8	3.4	6.3	3.2
Longitudinal	9.5	11.5	.125	1.7	7.0	4.1	6.1	3.6
Longitudinal	10	11.5	.125	1.7	1	;	}	1

frequency range 5-50 Hz at a rate of 2 minutes per octave for 7.5 minutes with an input of 0.125 inches DA from 5 to 12.5 Hz and 1.0 Gp from 12.5 to Note: Prior to resonance dwell, each container axis was swept over the

### Waveform Test Report AFPEA: HQ AFLC/DSTZ, TRIAD II-E

Test Ident: AF PACKAGING EVAL AGENCY Date of Test: 09-29-1990 Measurement Constants: Transcucer Dutout E - E - E - E - E - E - -- : fing Event hat Incapral Scalar ing internal Boalan 1111 5 5 5 5 i H TIME CUR AMP PEAK AMP 1ST INT 11.13 g's 11.91 g's 1190. In/s 1.0315 548m5 4 16.81 g's 16.79 g's 758.1 In/s 1.7219 640mS Ġ

#### Remarks

rish Colosive Anti-Artor Richet anipping and Storage Container (CNU-42) El. Mil-STD-543, 5.7.2 Resonance strenght and dwell rest. Resonance Cwell, Tite 1 Minute. Vertical Axis. Temperature (40 F. Input: Displacement (125 In DA. Frequency (10.5 Mg. Resonaer) Of 1 - Jopen Shartbard, CN 5 - Lower Fort.

### Wavetorm Test Record AFPEA; HQ AFLC/DSTZ, TRIAD II-E

Test Ident:	AF FACTABING EV	AL AGENOY	Date o	f Test: 0°	7-29-17
dessupe <b>ment</b>	Constants:		· # <u>:</u>	· .	-
Thereguzen Teo Ontegna Inc Intecna	. Etaler	514 (a. 11) 1344 1	Elvo skapin Tibus I	5¥1	::•
The control of the co					Company of the compan
Partina Total		1 1 1	1 1 1	<u> </u>	
CH TIME 1 652.8mS	CUR AMP			TIME BASE 640mS	7

#### Semarks

High Explosive Anti-Armor Rocket Shipping and Storage Container (CNC-480 E). MIL-STD-548. 5.7.2 Resonance Strength and Swell test. Resonance Swell. Time R Minutes. Pertical Asia. Temperature 140 F. Input: Disclacement .125 In DA. Freq end. .1.5 Mg. Response: Chilin Loser Starboard. Chilin Lower Fort.

## Waveform Test Report AFPEA: HQ AFLC/D8TZ, TRIAD II-E

Test Ident: AF PACKAGING EVAL AGENCY Date of Test: 09-29-1990

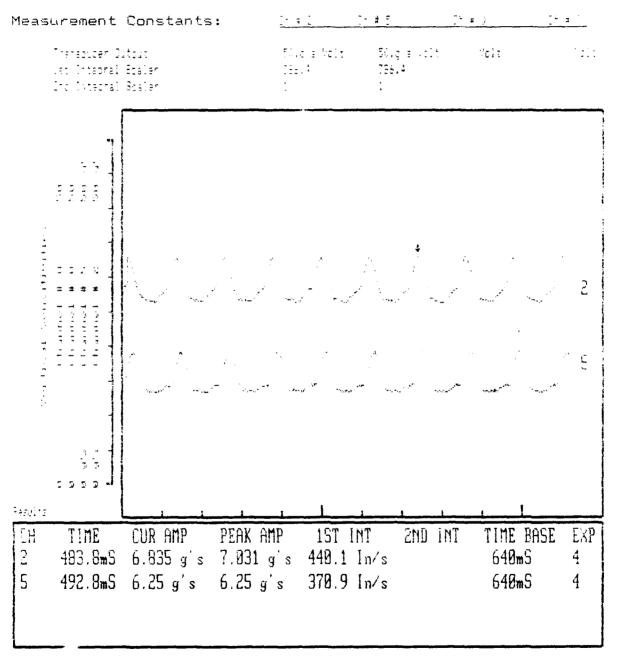
Measurement	Constants:	<u> 25 # 7                                 </u>	<u> </u>	<u> </u>
Therecucen 2 ist integnal 2nd Integnal	Boalan	50.0 s Voit 350.4 1	Single value Teva 1	Veit Asit
2 14 14 14 14 14 14 14 14 14 14 14 14 14				
Wer far it control from the care of the ca				
Results				
CH TIME 3 1.041S 7 1.102S	CUR AMP PEAK AM 10.54 g/s 11.52 g 23.04 g/s 24.60 g		√s	TIME BASE EXP 640mS 4 640mS 4

#### Remarks

Figh Explosive Anti-Arbar Rocket Shipping a D Storage Container (CNU-48) E1. MIL-570-548. 5.3.2 Resonance strength and dwell test. Resonance Dwell, Time 2 Minutes, Transverse Axis. Temperature 140 F. Input: Acceleration .78 3p. Frequency 12.1 4z. Resonance: Sh 3 + Opper Starboard. 3h 7 - Lower Port.

### Waveform Test Report AFPEA, HO AFLC/DSTZ, TRIAD II-E

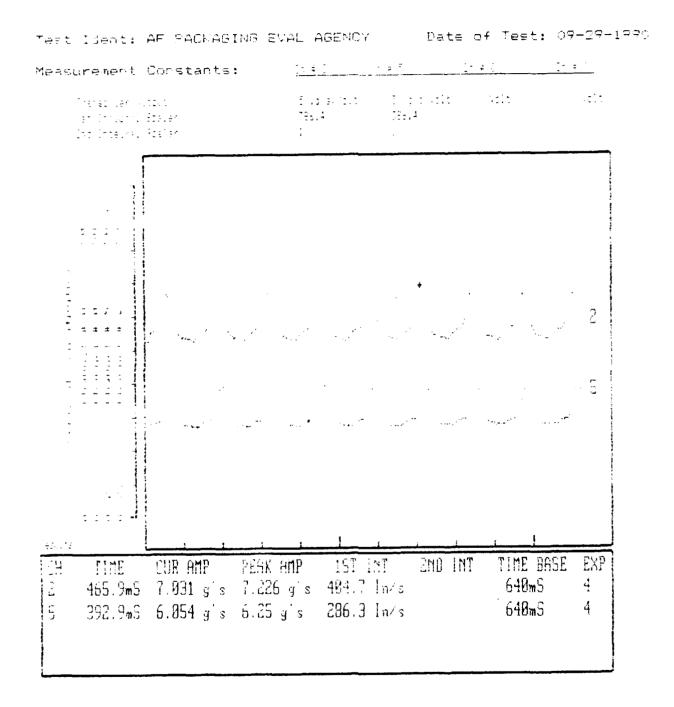
Test	Ident:	AF	PACKAGING	EVAL	AGENCY	Date	⊕÷	Test:	09-29-1990



### Remarks

High Explosive Anti-Armor Rocket Shipping and Storage Container (CNU-480/E), MIL-STD-648, 5.7.2 Resonance strength and dwell test, Resonance Dwell, Time 1.5 Minutes, Longitudinal Axis, Temperature 140 F. Input: Acceleration 1.0 GD Frequency 12.6 Ma. Resonae: Ch 2 - Upper Starboard, Ch 5 - Lower Port.

## Waveform Test Report AFPEA, HO AFLC/DSTZ, TRIAD II-E



#### Remarks

Asia E plossive Anti-Arada Robiet Chipping and Storage Confesion (CNC-480/E). Mil-575-545. 3.7.2 Resprence especiath and owers test. Resunance Dwell. Fime P.S Minutes. Longitudina. Aris. Temperature 140 P. Input: Displacement .125 to DA. Preguency 11.5 Po. Response: Child Pupuer Stanboard. Child - Lower Port.

Test Sequence 6, Fed-Std-101C, Method 5009.1, Leaks in Containers, 6.3, Pneumatic Pressurization Technique.

Leak Rate Psi per hour	0.004
sure (psig)	(1.53) $(1.52)$
Test Pressure In Water (psig)	42.2
Test Time Minutes	0

Test Sequence 7, Fed-Std-101C, Method 5019.1, Shock(Repetitive) Test, Ambient Temperature.

Container Orientation	Table Frequency	Table Input Frequency Displacement	Time	Vertical Upper Stbd	Vertical Response Upper Stbd Lower Port
race	7 H	III DA		) 1	) ) )
Bottom	4.5	1.0	S	6.8	12.3
Bottom	4.5	1.0	48	ე. გ	13.9
Bottom	4.5	1.0	09	!	1
Port	4.5	1.0	14	8.8	!
Port	4.5	1.0	52	0.6	1
Port	4.5	1.0	09	!	!
Aft End	4.8	1.0	7	9.9	4.9
Aft End	4.8	1.0	49	5.7	3.7
Aft End	4.8	1.0	09	1	:

## Waveform Test Report

Test Ident: AF PACKAGING EVAL AGENCY Date of Test: 08-30-1790

Measurement	Constants:	- <u> </u>	1 [5.4]	<u> </u>	<u>a )                                   </u>	<u> = .</u>
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Varional Secontification Structures and the second						
CH TIME 1 706.5mS 6 486.4mS	6.835 g a 7		197 INT 498.0 In/s 1064. In/s		TIME BASE 1.28S 1.28S	EXP FXP FXP FXP FXP FXP FXP FXP FXP FXP F

### Remarks

High Explosive Anti-Anton Rocket Shipping and Storage Container (INC-450/E).
Fed-Std-101. Method 5019.1. Shoc Test (Repetitive). Time 5 Minutes, Vertical Axis. Bottom Face. Ignit: Disclarament 1.0 in DA, Frequency 4.5 Hz,
Response: 15 1 - Upper Starboard, Ch 6 - Lower Port.

# Waveform Test Report AFPEA, HO AFLC/DSTZ, TRIAD II-E

Test Ident:	AF PACKAGING EV	AL AGENCY	Date of	Test: 08-30-1990
Measurement	Constants:	<u>[8 = 1                                  </u>	# <u> </u>	<u> </u>
Transpucer 3. Let .ntagral 2nd Integral	Bosler	50.g s/Volt 350.4 1	50.9 s/461t	eit veit
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A transfer of transfer to the second of the	And the second s			11100
9 9 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		· ,	ļ	,
CH TIME 1 739.8mS 6 734.7mS	CUR AMP PEAK AM 5.468 g's 6.054 g 13.86 g's 15.03 g	y's 419.7 In	n/s	TIME BASE EXP 1.285 2 1.285 2

### Remarks

High Explosive Anti-Armor Rocket Shipping and Storage Container (CNU-480/E). Fed-Std-101. Method S019.1. Shock Test (Repetitive:, Time **48** Minutes. Jertical Axis. Bottom Face. Input: Displacement 1.0 In DA. Frequency 4.5 Hz. Response: Ch 1 - Epper Starboard. Ch 5 - Lower Port.

# Waveform Test Report

Test Ident: AF PACKAGING EVAL AGENCY Date of Test: 08-30-1990

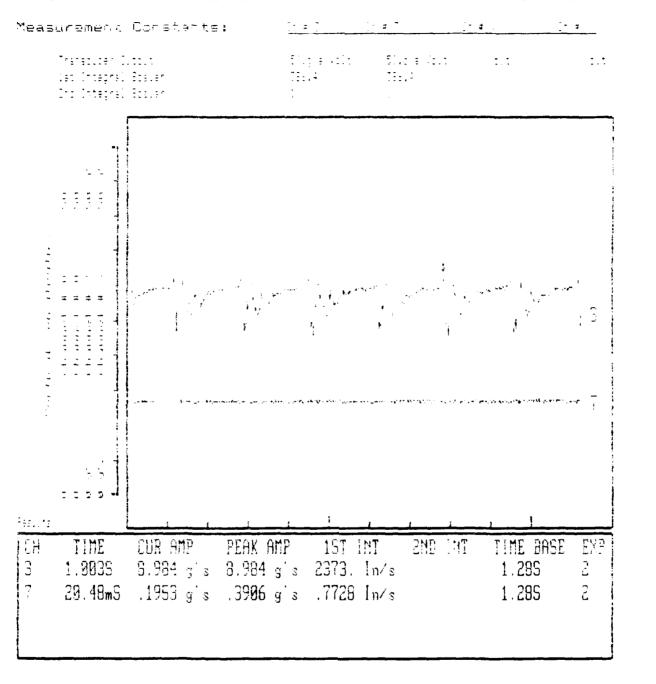
Measurement	Constants:	25 # 7	Ch 4 7	75 3 )	<u> </u>
Transquicen ( 120 întegna) 2%a întegna)	Bosler	50.g/s/961c 755.4 1	50.g/s//clt 386.4 1	/clt	Wait
200 - 200 -					THE THE PROPERTY OF THE PROPER
Verfissi Sensificiti Etranoel # 0 Francel # 0 Francel # 0 Francel # 0				en e	7
Sign of a H			. <b></b>		And the state of t
:	CUR AMP PEA 8.789 g's 9.3 -1.367 g's -1.3	75 g's 1725.	In/s	T TIME BAS 1.28S 1.28S	E EXP 2 2

### Remarks

High Explosive Anti-Armor Pocket Shipping and Storage Container (CNU-480/E), Feb-Sto-101, Method E019.1, Shock Test (Repetitive), Time 14 Minutes. Transverse Akis, Port Fare, Input: Disclacement 1.0 I CA, Prequency 4.5 Hz, Response: CN 3 - Upper Starboard, Ch 7 - Lower Port.

Waveform Test Report

Test Ident: AF FACTROINEGEOREGARDE: TRIADDAtaEof Test: (8-11-199)



### Remarks

High E plosive Anti-Armon Popket Shipping and Storage Container (NW-480/E). Fed-Sto-101. Method 5019.1. Shock Test Receptitive), Fine **52** Minutes. Transverse Akis. Port Face. Input: Dischacement 1.0 In SA. Pregiency 4.8 Hz. Resconse: In I - loger Starboard, Shift Hower Port.

### Waveform Test Report AFPEA: HO AFLC/D8TZ, TRIAD II-E

Test Ident: AF PACKAGING EVAL AGENCY Date of Test: 08-30-1990 ក្នុង 1 Measurement Constants: Fransducer Cutout 50.a/s//clt 51.g/s/Volt 7701t Welt Jás.4 38c.4 iat Intagnel Scaler Ind integral Scalar a o ស្ត្រ ស្ត្រស Vertical Sens Danie 1 Transfer Tra 5 3 3 5 5 945. . . E CUR AMP CH TIME PEAK AMP 1ST INT 2ND INT TIME BASE EXP 386.7 ln/s 857.6m5 6.640 g's 7.226 g's 1.285 2 4.882 g's 5.073 g's 849.9mS 418.4 In/s 1.285

#### Remarks

High Emplosive Anti-Arnor Rocket Shipping and Storage Container (CNU-480/E), Fed-Stu-101, Method 5017.1, Shock Test (Repetitive), Time 7 Minutes, Congitudinal Axis, Aft Face, Input: Displacement 1.0 in DA, Frequency 4.8 ms. Response: Ch 2 - Jpper Planboard, Ch 5 - Lower Port.

# Waveform Test Report

Test Ident: AF FAUNASING EVAL AGENCY Date of Tost: 08-30-1990

deasure	ment	Constants	:	<u> </u>		: <u> </u>			-	<del>;</del>
ist i	sauden la Integnal Integnal	Boalar		51/2 785/4 -	1.1	T1vp = vz T8cv4		-;•		7.7
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		en e	and the second			en e	n Turk	na Timbur Timbur Timbur		(1)
D I Remits			<b></b>	<u>.                                    </u>	<u> </u>			<u>.                                    </u>	<u> </u>	
2 913		SUR AMP 5.664 g's 3.710 g's		's 36		's	INT	TIME 1.28 1.28	<u> </u>	5 5 5 5 7

### Remarks

High Explosive Anti-Armor Rocket Britaing and Storage Container (200-480/E), Fed-Sto-101, Method 5019.1. Shock Test (Recetitive), Time **49** Minutes, Longitudinal Axis, Hét Pace, Indut: Disclarement 1.1 In DA, Frequency 4.8 Mg. Response: IN I - Locer Starboard, CN 5 - Cower Port.

Test Sequences 8 and 9, Fed-Std-101C, Method 5007.1, Free Fall Drop Test, 6.3, Procedure G, +140 Degrees Fahrenheit, 18 Inches Drop Height.

Container Orientation Accelerometer	Peal Vertical Gp	Peak Acceleration Response al Transverse Longitudio Gp	on Response Longitudinal Gp	Resultant Gp
<pre>Bottom(3) Upper Starboard</pre>	36.3	32.0	13.7	50.4
Lower Port Port Side(2)	32.8	8.2	0.8	34.0
Upper Starboard	11.7	54.7	4.7	55.5
Lower Port Corner 2-3-6	9.4	55.5	1.6	56.3
Upper Starboard	12.5	22.6	23.4	33.6
Lower Port Corner 1-4-5	7.0	25.8	20.3	33.6
Upper Starboard	4.7	28.1	27.3	39.1
Lower Port	1 1	;	31.2	;

### Waveform Test Pecort AFPEA; HG AFLC/DSTZ, TRIAD II-E

Test Ident: AF FACKAGING EVAL AGENCY Date of Test: 05-09-1990

Measurement Constants:	<u> </u>		- 1 .	<u> </u>
1 enablier liteut	Ella ellala	Fist Booth	5/41 + 1/1	į (2 ± 111
so Conecos, Boalen	72:14	77.4	TE: JE	785.4
Ind Internol Boatan			•	

	**	Vertical	Angle=	43.84 Hori	zontal Angle	e= 66.80	THE STREET STREET
					÷	,	e produktive med den gan in bage
			and the second seco	ent de magazante dan kabupat (m. 1. haban)			- in
:	<b>* * * *</b>					: '	d Cripping Land Harman
-			T ( ) my t mi			•	
<u>-</u> -					. •• y		- englise presidents on a principal personal
		e Santaran ( <del>-</del> .,,)	, i mustaanta ista s		and the second		
			Noncomposition of	ntopopoji – 1 iz komittovito i 111. j. i.	1		* 5.*
54717   CH	TIME	CUR AMP	PEAK AME	15T INT	TM! CMS	TIME BASE	EXP
] 1	12.2 <mark>8m</mark> 5		37.5 g's		3	256mS	<u> </u>
[2	12.2 <mark>9m</mark> S	13.67 g's	14.86 g'	s 25.65 In/s	3	256mS	1
3	12.20mS	32.03 gis	37.5 g s	61.36 In/s	}	256mS	1
4	12 28mS	50.39 g s	51.17 g	s 142.5 In/s	3	256 <b>mS</b>	1

### Pemarks

Habri Bodysak e Probe-Propri Scolat Brodysto vol Gronage Container (CNE-48% E).
Fed-Sto-1.1. Mernod S. T. Free (R.). Ordo Trans Procedure 3. Ordo Height 18 In.
Tercenature 145 F. Boddom Paras, Josen Standound Hodelerometer: Th. 1 - Nert.
Ch. 2 - Long. Ch. 7 - Trans. In 4 - Reskitsky. F. Modred UR 280 No. 27 do.

# Waveform Test Report AFPEA; HQ AFLC/DSTZ, TRIAD II-E

Test Ident: AF PACKAGING EVAL AGENCY Date of Test: 05-09-1990

Measurement	Constants:	51 ± 5	<u> </u>	<u> </u>	<u>- ‡ :</u>
Transduder G Lat Integral Inc Integral	Boalet	50.grs.Valt 385.4 1	50.g e25ei 78e.4 ∶	it IT vals Naut ISBN 4 1	50.g ex 151 755.4 2
	Vertical Angle=	78.22	Horizontal	Angle= 338.1	Section 1997 - Constitution
1901 1901 1901 1901	and the second section of the sectio	e gyanandigyydd ywydd enwyd o chwed		gang tan merendikan gelijah di Merendikan	( Land )
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Licentes Courses of the control of t		Till seemen an array on a		Angewitz	6
		and the second s	) }		CT)
San San I					
CH TIME	CUR AMP PEAK F			INT TIME BASE	1
5 192mS	7812 g/s 9.765		. In/s	256mS 256mS	1
5 192mS 17 192mS	32.81 g/s 32.81 -8.203 g/s -12.10	=		25 <b>6m</b> S	1
192mS	33.98 g's 33.98			256mS	1

### Remarks

High Explosive Anti-Armor Rocket Shipping and Storage Container (CNU-480(E)). Fed-Sto-101. Method 5007. Free Fall Drop Test. Procedure 6. Brod Height 15 in. Temperature 140 F. Bottom Page. Lower Fort Accelerometer: Sh 5 - Long. Ch 5 - Vert. Sh 7 - Trans. Ch 3 - Resultant. Filtered LP 290 Hz -7 db.

# Waveform Tost Report

Test Ident:	AF FAC: - 31	CNG EMAL	45E11077	Ðat	ia of ⊤	est: O	5-09-19	<b>3</b> ⊕(
	Constants					<u> </u>	4 1	
T Gretoren 1. Set Introduk Shool Steores	iti*	= . -=. :			f.,; 78:	s vili	5747 s (1) 78244 1	•
1	ing mercinal and the second se	hagies 77	. Br. hor	ridontal	ring i e≡	274.3		
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			entra in the second	an	ر میں است اور	~_^.™	71	
	*							•
2 2 2 2 3 4 4 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	<u> </u>	j,		,		i Namys	4	
2H TIME 1 12.28mS	CUR AMP 11.71 g/s					ME BASE 56mS	EXP 1	
2 12.29mS 3 12.29mS	4.687 g/s	=			2	<b>56m</b> S	: 1	
3 12.29mS	-54.68 g's -	-54.68 g's	-75.73 In	18	2	56mS	1	
4 12.28mS	55 46 g's	56,25 g/s	<b>80</b> .99 In	/3	2	56mS	1	

#### Remarks

Hadr Buddesive Anti-Hondon Act et 1988 Juliou de la Bronade Container (ING-427 B). Fed-Bto-1 1 Method 5 (7) Flex Paul Crop Tean, Procedure 3, Ordo Height 18 In. Tambers tine 1987 F. F. (1988 I. doben Bryntiano Accelerameter) Ch 1 - Vent. Uh 2 - 1988 Julio Containe Accelerameter. Ch 2 - Vent.

## Waveform Test Report AFPEA, HQ AFLC/D8TZ, TRIAD II-E

Test Ident: AF PAC	KAGING EVA	AL AGENC'	r Da	te of Test:	05-09-1990
Measurement Consta	nts:	<u> </u>	<u>05 # 6</u>	On # 7	<u>05 # 3</u>
Fransqueer Output Lat Int — al Boaler Ind Integral Boaler		50.g a Valt Ida.4 i	50.g/s/Val 155.4 1		Eng sivelt TES.4 1
Verti	cal Angle=	69.35	Hori <b>zo</b> ntal	fingle= 67.75	
5.5 A 110 A	and the figure and the	والمعاولية في الموسط المع <sup>اول</sup> الم		الراشيني إيدي أستستجيبه بياديت	רט
	eti 1900 - Alexandria 1900 - Alexandria 1900 - Alexandria		المواقع المادينية والمواقع الموادة <u>مسا</u> ليسة الموادة <u>مسالية المواد</u> ة	and the second seco	6.
Ven tre at Seens (1993) Channel # 8 Channel # 6 Channel # 5			taga sa		en men en e
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		the first week week week week	ورمان المراجعين والمراجع المواجعة		(7)
	P PEAK AM	IP 1ST	INT 2MD	INT TIME BE	ASE EXP
2	g's 10.93 g			256mS	i de de la companie d
	g's 14.84 g	r's 29.36	In/s	256mS	1
7 55.29mS 55.46	g's 56.25 g	y's 89.95	ln/s	256mS	1
9 55.29mS 54.68	g's 55.46 g	,'s 76.04	In/s	256mS	1

### Remarks

High Explosive Anti-Armor Rocket Shipping and Storage Container (CNC-480/E). The Fed-Std-101. Method 5007, Free Fall Orop Test, Procedure S. Orop Height 18 in. Temperature 140 F. Port Bide D. Lower Port Accelerometer: Ch 5 - Long. Ch 5 - Vert, Ch 7 - Trans. Ch 8 - Resultant, Filtered LA 290 Hz -7 db.

# Waveform Test Report AFPEA: HQ AFLC/DBTZ, TRIAD II-E

Test Ident:	AF PACKAG	ING EV	AL AGENI	CX	Sate (	of Test: O	5-09-1990
Mossurement	Constants	±	<u> </u>			4.7	# 4
Transquian 1. Man Internal Inc Internal	Boalan		500 p c 75004 1		: : :51t :	5%; € vsit 35:,4 1	51,5 s valt Taev4 1
	Vertical	fing le=	59.84	Horizo	ental Ang	le= 316.0	distillings - repair empressions
1.17	<u>.</u>	i Light (Mindel)		ومعتدي مساء مسوية الدورة	and any and any and any and any	artaini da an	T T T T T T T T T T T T T T T T T T T
* * * * * * * * * * * * * * * * * * * *	) 	i sag	بخدر سندي المحدودي	. <sup></sup>	an ang an transit of the section of	ررسود مسر	
Orange of the Control		. j/ts . j/s	,		رهان معابيري مامين با معسور		( T) T)
		*	and the second s	e That a property and	era en estado en est	and the second second	T
Pesuchs					<del></del>	!	
CH TIME	CUR AMP				ZMD INT	TIME BASE	EXP
i	12.5 g/s 23.43 g/s					256mS 256mS	
Į.	-22.65 g's					256mS	1
1	33.59 g's	-				256mS	1

### Remarks

High Enclosive Anti-Annor Focket Sciences and Storage Container (1976-480/E).
Fed-Std-101. Method in Jil. They Fall Grob Test. Procedure 3. Grob Height 13 In.
Temberature (40 F. Groven Grine, Loper Standband Accelerometer: 35 1 - Vent.
35 3 - Conu. Skill Thans. 35 4 - Resultant. Filtered LP 290 9z - 3 db.

### Waveform Test Report AFPEA: HO AFLC/D872, TRIAD II-E

Test Ident: AF PACKAGING EVAL AGENCY Date of Test:	05-09-1990
Measurement Constants: [145 ] [145 ] [147	<u>:-                                    </u>
Fransducer Outcut 50.2 s volt 50.2 s/bolt 51.2 s volt ist Integral Boalar 185.4 186.4 186.4 185.4	
Vertical Angle= 23.56 Horizontal Angle= 32.43	al major :
	(-)
	C.) 3
Fessilts	
CH TIME CUR AMP PEAK AMP 1ST INT 2ND INT TIME BAS	į.
5 56.32mS 20.31 g's 24.21 g's 36.16 In/s 256mS 6 56.32mS 7.031 g's 17.96 g's 25.34 In/s 256mS	1
7 56.32mS 25.78 g's 25.78 g's 33.38 ln/s 256mS	<u>∔</u>
30.32m3 23.10 g/s 23.10 g/s 33.30 th/s 256m5	1

### Remarks

High Erolosave Anti-Armor Rocket Shipping and Storage Container (CNU-480 E), Fed-Std-101. Method 5007. Free Fall Groot Test. Procedure 6. Drop Height 18 In. Temperature (40 F. Corner 1-1-c. Eiwer Port Accelerometer: 155 5 - Long. Ch 5 - Vert. 05 7 - Trans. 35 8 - Resultant, Filtered ER 190 Hz -3 db.

# Waveform Test Report AFPEA; HQ AFLC/DSTZ, TRIAD II-E

Test Ident:	ΔF	PACKAGING	EVAL	4 GENOV	Date	o f	Test:	05-09-1990
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Measurement	Constants	:		· 	<u> </u>		<u> </u>	·	<u> </u>
Prezecuter (1) (et lategral (no (noegna)	Boaler			3 3.1 4		5 a 5 i . •		Elig svent Esi4 E	51/g s/ks. 355/4 1
	Vertical	Angle:	96.	ð0	Horis	ontal	Ang l	e= 134.2	Parameter and the second secon
2 (1) (1) (2) (2) (3) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	<u> </u>			·		·		, '', '', '	4
4.1			Turffe ( <sub>1</sub> .	·		and the second order	· · · · · · · · · · · · · · · · · · ·	one, i	C.J.
The street of th	S	en e	o e de se	* Northwes <del> - 1</del> 15		المعارب المعارب			(, )
2 2 2 2 4 2 2 2 2 2 3 3 4 4	ooskooninkaalakka rookka a s <b>ak</b>	19 1985 1994 1995	·	ann o <u>r h</u> agaige an a' <sup>an</sup> a' an	المعارض والمعارض والم		······································	ارسام أراس	44.
Peguita	JUN OND	nrav a	i MD	107	TIME	TIME.	LNIT	TIME DO	ר דטה
i	CUR AMP -4.587 g's					Ons.	1111	TIME BAS 256mS	SE EXP I
:	-27.34 g's		_					256mS	
3	28.12 g/s		-					256mS	
4 11.77mS	39.06 g s	39.86	gʻs	77.90	In/s			<b>256m</b> S	1

### Remarks

High Emplosive Anti-Artor Picket Enicolog and Storage Container (CNU-480 E).
Fed-Std-101. Met.ob 1907. Pree Pail Drop Test, Procedure 6. Drop Height 13 In.
Temperature 144 F. Corner 1-4-5. Upper Standbard Accelerometer: Ch 1 - Vert,
Ch 1 - Cono. Ch 3 - Tracs. Ch 4 - Resultant, Filtered LP 290 Hz -3 db.

# Waveform Test Report AFPEA; HQ AFLC/DSTZ, TRIAD II-E

Test Ident: AF PACKAGING EV	AL AGENCY	Date of	Test: 05	5-09-1990
Measurement Constants:	<u>05 # 5                                 </u>	<u>5 [5 #</u>	7 75	<u> </u>
Transducer Cutout 1st Integral Scalar 2nd Integral Scalar	\$3.9 s/Velt 50 33a.4 33 1 1	%g s//olt 5 56.4 73 1	Ngis Valt Saya	50/g1s/vala 785/4 1
Vertical fingle=	100.8 Heri	zental Angla	44.72	
5 5 5 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	The state of the s	anang garang <sup>ang a</sup> rang garang garang	- <u>-</u> -	5
				6
				CO
Charmal # # Charmal # # Charmal # #				5 e : 10; 5 ° 70 ° .
<u> </u>				e e e e e e e e e e e e e e e e e e e
্ কু জু কু কু কু কু				
200-				
F857/318				
CH TIME CUR AMP PEAK AMS 5 64.51mS -31.25 g/s -32.03 g		THI DHS	TIME BASE 256mS	EXP
			256mS	1 1
1			256mS	1
8 64.51mS 145.3 g's 146.0 g	g s dod.d in/s	<u> </u>	256mS	1

### Remarks

High Explosive Anti-Armor Rocket Shipping and Storage Container (CNU-480/E), Fed-Std-101, Method 5007, Free Fall Broo Test, Procedure 6, Brop Height 18 In, Temperature 140 F. Sorner 1-4-5, Lower Port Accelerometer Byer-ranged, Ch 5 - Long, Ch 6 - Vert, Ch 7 - Trans, Ch 8 - Resultant, Filtered LP 290 Hz -3db.

Test Sequences 10 and 11, Fed-Std-101C, Method 5007.1,

6.3, Procedure G, -25 Degrees Fahrenheit, 18 Inch Drop Height.	grees Fah	renheit, 18 ]	nch Drop Heigh	إنه
Container Orientation	Pea	Peak Acceleration Response	on Response	
Accelerometer	Vertical Gp	Transverse Gp	Longitudinal Gp	Resultant Gp
Top(1)				
Upper Starbcard	76.6	7.3	3.9	81.3
Lower Port	1	9.3	0.8	1
Corner 3-4-6				
Upper Starboard	11.7	23	93.0	95.3
Lower Port	25.8	46.1	49.2	71.9
Corner 1-2-5				
Upper Starboard	7.0	15.6	53.1	54.7
Lower Port	2.3	53.1	22.7	56.2
Upper Starboard(2 nd)	14.8	77.3	34.4	84.4
Forward Side(5)				
Upper Starboard	!	!	1	! ;
Lower Port	2.3	24.2	43.0	47.6

# Waveform Test Report AFPEA, HQ AFLC/DSTZ, TRIAD II-E

Test Ident: AF PACKAGING EVAL AGENCY Date of Test: 06-09-1990

Measurement Constants:	<u> </u>	27 # 2	<u> Ch # J</u>	75 ± 1
Themaqueen Sutout (at Integral Boaler Ind Integral Boaler	<b>5</b> 0.gis/7al 735.4 1	1 51.g/s/Vzlt 735.4 1	50.; e:Valt 19a.4 1	50.g/s/Valt 385.4 :
	le= 160.0	Horizontal I	Angle= 278.2	4
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	•			PARTETION CONTRACTOR C
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				de desirant de la grande de la constantina del constantina de la constantina de la constantina del constantina de la con
				C. 7
		en un experience de la companya de l	and the second s	(7.7)
CH TIME CUR AMP PER	AK AMP 1ST	INT 2ND I	NT TIME BA	SE EXP
1 14.33mS -76.56 g's -76.			256mS	4
2 14.33m5 3.906 g/s 7.8	=		256mS	4. I
3 14.33mS -27.34 g's -27. 4 14.33mS -81.25 g's -81.	-		256mS 256mS	1

#### Remarks

High Explosive Anti-Armor Rocket Shipping and Storage Containmer (CNU-ASD/E). Fed-Std-101. Method 5007. Free Fall Drop Test, Procedure 3. Drop Height 18 In. Temperature -25 F, Top Face 1. Usper Starboard Accelerometer: Ch 1 - Vert. 25 2 - Long, Ch 3 - Trans. Ch 4 - Result, Filtered LP 270 F -3 db.

# Wave-orm Test Report AFFEA: HQ AFLC/DSTZ, TRIAD II-E

	AF PACHAGING EV				6-09-1990
Messumement  Profession I.  Lat Present  Con Integral	Estat		77,1 8 2.1		·.:
1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			•	or was given the	
A contract to the contract of			وستري المستهدات المستدامين والمسائر والم	a nadyn, tre-a	Widelphoto esta de mantenario de la companio della
5	CUR AMF PEAK A .7812 g's -12.5 g -22.65 g's 24.21	's -22.87	In/s	T TIME BASE 256mS 256mS	E7

#### Remarks

High Explosive Anti-Armor Focial Shipping and Storage Containner (2NU-480/S), Fed-Std-101, Method 5000, From Fail Ordp Test, Procedure 3, Ordp Height 13 In. Temperature HIE F. Too Pack 1, Edwer Port Accelerometer Maifunction, IN S Hipping 10 and Jent, Child Thrans, Child - Resultant, Fritered LP 290 At HI dt.

### Waveform Test Report AFPEA; HO AFLC/DSTZ, TRIAD II-E

Test Ident: AF PACKAGING EVAL AGENCY Date of Test: 06-09-1990

Measurement	Constants:	<u>[% # 1</u>	<u> </u>	7- 4-7	<u> </u>
Transducer S Ist Integral Ont Integral	Bosler	50.g/s/Valt 35s.4 1	50,;(s/Ma) 386,4 3	.t 50.g s voit 788.4 1	50.g/s/vol 785.4 1
	Vertical Angle=	96.96	Horizontal	Angle= 14.13	e se differe and the second
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o beat Secondary Community		ili Santa da Santa da S Santa da Santa da S			(1.)
(1947) (1972) (1973) (1973) (1973) (1973) (1973) (1973) (1973)			!		delivir de englis i de englis
Pasuins	- T	-\\ 	il I		4
CH TIME 1 13.31mS	CUR AMP PEAK AU -11.71 g's -12.5 g			INT TIME BAS 256mS	SE EXP
2 13.31mS	92.96 g's 93.75			256mS	1
<u> </u>	23.43  g/s  79.68  g	_		256mS 256mS	
15.51m5	95.31 g's 103.1	g s 160.7	111/2	CMOCS	1

#### Remarks

High Explosive Anti-Armor Rocket Shipping and Storage Container (CNU-ABO/E). Fed-Std-101. Method 5007. Free Fall Drop Test. Procedure 6. Brop Height 18 Im. Temperature -25 F. Corner 3-4-6. Soper Startbard Accelerometer: Ch 1 - Vent. Ch 2 - Long. Ch 3 - Trans. Ch 4 - Result. Filtered LP 270 Hz -3 db.

# Waveform Test Report

Test Ident: AF PACKAGING EVAL AGENCY Date of Test: 06-09-1990

Measurement C	onstants:	<u> </u>	<u> </u>	]: 4 <sup>-</sup>	- = }
Thenspucer (0.15 (st Indegral Bo (no Indegral Bo	1.07	50,5 a   515 785,4	E.ug a vel EBB.4 1	t 51/g a valt 188/4 1	Σ (2 € 2015 552.4 1
	Vertical Angle=	1,090	Horizontal	fingie= 90	
(114) (2114) (2114) (2114) (2111) (2111)		ing Service and the second	·—		1.71
1001 # 1001   100		والمستقدر المستودة الأدار	and the second s		0 7:
Charles at Setting to the contract of the cont	· ; <del>2</del> 1				
A TO		·			C.C.
CH TIME	OUR AMP PEAK AM	1P 1ST	INT 2ND	INT TIME BASE	
5 53.24m3	49.21 g's 49.21 g			256mS	1
i .	25.78 g/s 25.78 g			256mS	1
ş .	46.09 g's -47.65 g 71.87 g's -71.87 g			256m3 256mS	1

### Remarks

High Emplosive Anti-Armon Rosest Bhicolog and Storage Container (CNU-480-8). Fed-Std-101. Method 5007. Free Fall Drop Yest. Procedure 3. Drop Height 18 In. Temperature -25 P. Corner 3-4-5. Lower Fort Accelerometer: CS S - Long. Ch S - Vent. CS T - Trans. Ch S - Result. Filtered UP 290 Hz -3 dp.

### Waveform Test Report AFPEA: HG AFLC/DBTZ, TRIAD II-E

Test Ident: AF PACKAGING EVAL AGENCY Date of Test: 06-09-1990

Measur	ement	Constants:	<u> 15 4 1                                </u>	[1 4 ]	25 # 7	27	1
1st	naduden Ze Integnal Integnal	Boslan	50.g/s/Vala 385.4 1	: 50.51979e 336.4 :	lt 50/g/ 196.4 1		50.g's/Volt 356.4 1
lş:	j <b>-</b> ]	Vertical Anglo	== 82.77	Horizontal	Angle=	196.3	
		<u> </u>				and age,	1
(1) (1)	3 S S S S S S S S S S S S S S S S S S S	,	(				
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<b></b>	* # #	· · 1					
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tas la Dantine (	1.41.11814		-	م <u>دور</u> رساله مسیسه مسیده م <sup>سیده</sup> م <sub>دور</sub> این د			()
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	3			and the second s	عالم. المستخدم المهيمة المرسيسيسيسيمين	Transconduction of the Contraction of the Contracti	4
CH CH	TIME	CUR AMP PEAK	AMP 1ST	INT 2NT	INT TI	ME BASE	EXP
		7.031 g's -13.2				56mS	1 -
	7.92mS	-53.12 g's -53.1	2 g's -86.80	6 In/s	2	56mS	1
•		-15.62 g's -29.6				56mS	1
4 1	7.92mS	54.68 g's 54.6	8 g s 113.	4 In/s	2	56mS	1

### Remarks

High Explosive Anti-Armor Rocket Shipping and Clorage Container (CNU-1807E). Fed-Std-101. Method 5007. Free Fall Drop Test. Procedure 8. Drop Height 18 In. Temperature -25 F. Corner 1-2-5. Upper Starboard Accelerometer: Shill Vert. Chiliping. Shill Trans. Chiliping. Filtered LP 290 Hz -3 35.

# Waveform Test Report AFPEA, HQ AFLC/DBTZ, TRIAD II-E

Test Ident: Measurement	AF PACKAGING ENCONStants:				06-09-1950 <u>-                                    </u>
Transticen I. Set Integral Inc Integral	Boaler	I vi e vivi 78+v4 1	EDVÇ svVelt Tesv- 1	57,5 a 7575 755,4 1	50/10/8/2010 784/4 1
	Versical Angle	20 /3	Horizontai	Angle= 90	
T 1113 / 1		<del>*** =* *</del> * * * * ±.	an amount of the second and second second	er en	5
		يتناه الرواج المحادة	ميني بها معمد مندي بعد	erren (et ou grante	4
	i.				
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				and the state of t	
	*				
		and the state of t			
Resolts					
CH TIME	CUR AMP PEAK				(
•	-22.65 g's -25 g's			256mS	
1	-2.343 g/s -3.125	-		256mS	1
3	93.12 g/s 53.12			256mS	
8 49.15mS	56.25 g s 56.25	g s 51.18	In/s	256mS	1

### Remarks

Aigh Explosive Anti-Armon Rocket Shilling and Storage Container. CNU-480/EN.
Fed-Std-101, Method 5/07, Free Fair Trock Test, Procedure 3, Onco Height 18 In.
Tamberature -LS T. Commen 1-2-5. Lower Port Accelerometer: Ch 5 - Long.
Ch 5 - Ne t. Ch 7 - Tracs. Ch 9 - Fessit, Filtered LR 280/82 -7 db.

## Waveform Test Report AFPEA, HQ AFLC/DBTZ, TRIAD II-E

Test	Ident:	ΑF	PACKAGING	EVAL	AGENCY	Date	σf	Test:	06-0 <b>9-1</b> 990

Measurement	Constants:	25.4.1	15 # 1		<u>h # 4</u>
Transpuder Co Set Integral Cha Integra.	Boaler	50.0 s//slt 755.4 1	50/grankelt 385/4	Blugis velt DBau4 I	51.5 ≤ 4515 736,4 1
<b>-1</b>	Vertical Angle=	<b>30.0</b> 6	Horizontal	Angle= 65.96	
				nay na ngunda ngunggana	of our of
6.94 (1987) (1987) (1987) (1987)	•		y amin'ny ara-daharanjaranjaranjaranjaranjaranjaranjara	and the second seco	
Charters A Contractions  (Charters A A Charters A A Charters A A A A A A A A A A A A A A A A A A A		1		g Haran — gayayan yan <sup>ama</sup> n ara	CD
A Company of the comp	•	i 			A. E. S.
CH TIME	CUR AMP PEAK A				i
1 27.64mS	14.84 g/s 16.40	-		256mS	
1	34.37 g's -53.12	=		2 <b>56m</b> S	
}	77.34 g/s 81.25	-		256mS 256mS	1
4 C1.04m3	84.37 g/s 90.62	y 3 ££3.b	177/8	כמוסכג	

### Remarks

High Explosive Anti-Arror Rocket Shipping and Storage Container (CNG-450-2). Fed-Storik: Method SCR7. Free Fall Drop Test. Procedure 3. Drop Height 18 In. Temperature +25 F. Sorner 1-2-5. Upper Starboard Accelerometer: Sh 1 - Vert. Ch 2 - Long. Sh 3 - Trans. Sh 4 - Result. Filtered (F 290 Hz  $\pm$ 3 db.

### Waveform Test Report AFPEA, HQ AFLC/DSTZ, TRIAD II-E

Test Ident:	AF PACHAGING EV	AL AGENO	Y Date	of Test: O	는 - () 역 - 1 변경()
Measurement	Constants:	2	<u> </u>		<u>: -</u>
Tranadudan 1 Ust Integnal Ind Integnal		in a tra	5 up a viit 75: 4 1	E   2 € /2.1 .82.4	1 ; 3 ; 5 ; 33:4 1
20 - 110 - 1 20 - 110 - 1 20 - 110 - 1 20 - 110 - 1 20 - 110 - 1	Verti.si fingle=	70 . <u>f</u>	rorisontal Am	gle: 125.3	A POPULATION OF THE POPULATION
(1) (2) (2) (2) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1			and produced the second of the		A COLOR COMPANY AND
				, <b>!</b>	
SH TIME 1 51.2m5 2 51.2m5 3 51.2m5	CUR AMP PEAK AND 7.831 g = 7.831 g = 7.831 g = -51.56 g = -3.125 g = -3.125 g = -34.37 g = -51.56 g	y's 8.346 y's -46.67 y's -3.799	In/s In/s In/s	TIME BASE 256mS 256mS 256mS 256mS	EXP 1 1

### Remarks

High Elbibsive Hall-Armon Rocket chilototi and Starage Container (2004-480 E). Red-Std-101. Method 5 07. Rise Rell Crop Teat. Procedure 5. Ordo Height 18 In. Tenderature -07 7. Finand Side 5. Loser Starbbard Accelerometers (05 1 - Vert 05 2 - Loto (20 3 - 10 5). Detached.

# COPSTE, TRIAD TI-E

Test .dent: AF PACKAGING EVAL AGENCY Date of Test: 06-09-1990

Measurement Constants:	<u> </u>	<u> </u>	i a	<u> </u>
*rarecuser litoit	524 <b>5</b> 18 (22 <b>1</b>	50.ç°a/%cit	Elvş a Vilt	Eviş si∕sit
dat Intebral Boaler	788.4	Jās,4	Jē∉,4	:::. <u>-</u>
Ind Integral Scaler	÷	:	:	

	44	Vertical Angle= 160 Horizontal Angle= 93	and the consequence of these cale
	1.1141		5
er L			
4		and the second s	Ó
	# # # # # 		, L
; 7			5
-	The red us		e e e e e e e e e e e e e e e e e e e
•	en e		
			1.37)
Page 118			
EH		CUR AMP PEAK AMP 1ST INT 2ND INT TIME BASE	EXP
5		-42.96 g's -45.31 g's -85.93 In/s 256mS	-
6		-2.343 g's 12.5 g's 30.60 In/s 256mS	
7 - 7		24.21 g's 24.21 g's 56.26 In/s 256mS	
8	53.24mS	47.65 g's 47.65 g's 99.84 In/s 256mS	<u> </u>

#### Remarks

High E plastic Acti-Armor Rocket Chisping and Storage Container (No-469 E). Fed-Std-101. Method 5000. Free Fall Drop Test. Procedure 8. Ordo Height 18 In. Temperature HOS F. Forward Side 5. Lower Port Acce. Inmeter: Ch 5 - Long. Sh 5 - Vert. Co 7 - Trans. Sh 8 - Result. Filtered LS 290 Mz -3 db.

Test Sequence 12, Fed-Std-101C, Method 5009.1, Leaks in Containers, 6.3. Pneumatic Pressurization Technique.

Leak Rate Psi per hour	0.026 0.036	. Superimposed Load Test.
Test Pressure In Water (psig)	43.3 (1.57) 42.5 (1.54) 42.3 (1.53)	101C, Method E.
Test Time Minutes	0 68 75	Test Sequence 14, Fed-2:d-101C, Method 5

Nimension Orientation	Contai	Container Dimensions	
	Pre-Test Inches	Loaded 1 Hr. Inches	Post-Test Inches
Vertical Corner 2-6 Vertical Corner 4-5 Vertical Corner 4-6 Diagonal(1-2-6)-(2-3-5) Diagonal(3-4-6)-(1-4-5)	15.2 15.4 15.4 4.9 8.5	स ल ल ल क उटा ल क क क क क क क क क क क क क क क क क क क	15.4 15.4 15.4 15.4 48.5
	)	oka nound uniform	ly distribute

Note: The container was loaded with a 3063 pound uniformly load centered on the container for 67 minutes.

MIL-STD-648A, 5.8.3, Hoisting Fittings Strength Test. 7

	Daile	None
15, MILL SILVEST	Superimposed Load Pounds	542
Test Sequence 15, mil	Hoisted Time	ı vo

equence 16, MIL-STD-648A, 5.8.5, Single Hoisting Fitting Strength Test. E

Damage or Deformation	None None			
Hoisted Time Minutes				
rest sequence 191 Fitting Location	Aft End Forward End			

Deformation Damage or None None Test Sequence 17, MIL-STD-648A, 5.4.8, Tiedown Strength Test. Loaded Time Minutes ~ Pounds Lateral 200 204 Base Load Longitudinal Pounds 410 450 Rotated 180 Degrees Base Load Direction Forward/ Lateral Aft/ Lateral

configuration with chain. The loads are applied to the container base Note: The container is secured by tiedown provisions in four point along respective container centerlines.

Test Sequence 19, Fed-Std-101C, Method 5009.1, Leaks in Containers, 6.3, Pheumatic Pressurization Technique.

Leak Rate Psi per Hour	0.036 0.032	urel Integrity Test.	Damage or Deformation	None	None
ure (psig)	(1.59) (1.55) (1.55)		ure (psig)	(2.0)	(-1.58) (-1.51)
Test Pressure Inches Water (psig)	43.9 42.9 8.5	Test Sequence 20, MIL-5.D-648A, 5.5.2.	Test Pressure Inches Water (psig.	+56.2 +55.6	-43.5 -41.6
Test Time Minutes	0 60 75	ce 20, MIL-5	Test Time Minutes	0 15	35
		Test Sequen		Pressure	Vacuum

Test Sequence 22, Fed-Std-101C, Method 5007.1, Free Fall Drop Test, 6.3, Procedure G, Ambient Temperature, 18 Inch Drop Height, Filtered 125 Hz J.P.

Container Orientation Accelerometer	υ	Peak Acceleration al Transverse	Lon	Resultant Gp
	ďS	Q,	S.	).
Bottom(3)		,		4 65
Lower Port	73.4	1.6	m .	<b>#*</b> 57
Upper Starboard	59.4	4.7	1.6	28.6
Port Side(2)			ć	
Lower Port	2.3	73.4	٠	•
Upper Starboard	10.2	85.9	1.6	87.5
Corner 2-3-6			!	
Lower Port	13.3	13.3	•	37.5
Upper Starboard	15.6	16.4	23.4	33.6
Corner 1-4-5				•
Lower Port	5.5	11.7	36.7	40.6
Upper Starboard	15.6	18.0	30.5	37.5
Top(1)				•
Lower Port	43.8	18.8	1.6	46.9
Upper Starboard	52.3	19.5	3.1	55.5
Corner 3-4-6			6	
Lower Port	18.0	19.5	29.7	7.74
Upper Starboard	6.3	23.4	27.3	75.7
Corner 1-2-5			c c	9 O V
Lower Port	14.8	21.1	7	40.6
Upper Starboard	18.8	28.1	26.6	43.0
Forward End(5)			6	C
Lower Port	7.0	1.6	32.0	· ·
Upper Starboard	0.8	0	26.6	8.67
Bottom(3) 2 nd Drop			Ó	ć
Lower Port	81.3	11.7	2.3	0.40
Upper Starboard	53.1	3.1	1.6	53.1

## Waveform Test Report AFPEA, HQ AFLC/DSTZ, TRIAD II-E

Test Ident:	AF PACHAG	ING EVAL	AGENCY	Date	of Test:	03-10-1990
Measurement	Constants	‡ <u></u>	<u> </u>	<u>:</u>	- 4	<u> </u>
The abulan I wat I habhai Ind Intebnai	Ecalar		. 1 -2.1 1 19	ola ili mul	Elvis int Tip.4	51.ç°s veit 785.⊄ 1
	Vertical	ਜੇਸ਼ਕੂਵਿਵ 1ਹੋਂ.	2 Hari:	zontal Ar	ngle= 189	
						7
# 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		÷	·			0.7
		, <sup>-, -,</sup> -, -,	- <u></u>		era er	В
CH CME 5 63.48m5 6 63.48m6 7 63.46m6 8 63.48m8	73.43 g/s 1.562 g/s	73.43 g s 12.5 g s	9 in/s 107.5 In/s 12.98 In/s		I IIME 3AS 256mS 256mS 256mS 256mS	E EXP

## Remarks

rugh Sloics.ve Anti-Hrmon Rocket Bailoning and Storage Container (DNB-480/E). Fed-Btok101. Method Exil. Free Hall Inc. Test. Procedure G. Grob Heldht 18 Inc. Amb. Temperature. Bottom Race D. Lower Fort Hodelerometer: ChiE - Long. Chia - Vert. ChiE - Trons on Chia Resultant. Filtered LP 125 Hall Bottom

# Waveform Test Report AFPEA, HO AFLC/DSTZ, TRIAD II-E

Test Ident:	AF PACKAGING EV	AL AGENCY	Date	of T <b>est:</b> 0	3-10-1990
Measurement	Constants:	<u> </u>	4 7	# 7 I*	<u> </u>
Transocter Is ist Integral Ind Integral	∃çai≅″	5%g s%elt 788,4 1	50.g/s Velt ISau4 1	Elig a volt Teav <sup>a</sup>	51/g a Ne1t 1738/4 1
	Vertical Angle=	4.855 Ha	rizontal Ang	le= 251.4	The property distribution is a management of the property of t
Verthoal Centralities Channel # + Channel # + Channel # + I hannel # 1					de est (, ) (, ),
Pegulia	<u> </u>				A
2 12.28mS 3 12.28mS	CUR AMP PEAK A 59.37 g/s 59.37 -1.562 g/s 10.93 -4.687 g/s 31.25 58.59 g/s 58.59	g's 75.11 l g's 19.47 l g's 13.91 l	n∕s n∕s n∕s	1171E BASE 256mS 256mS 256mS 256mS	EXP

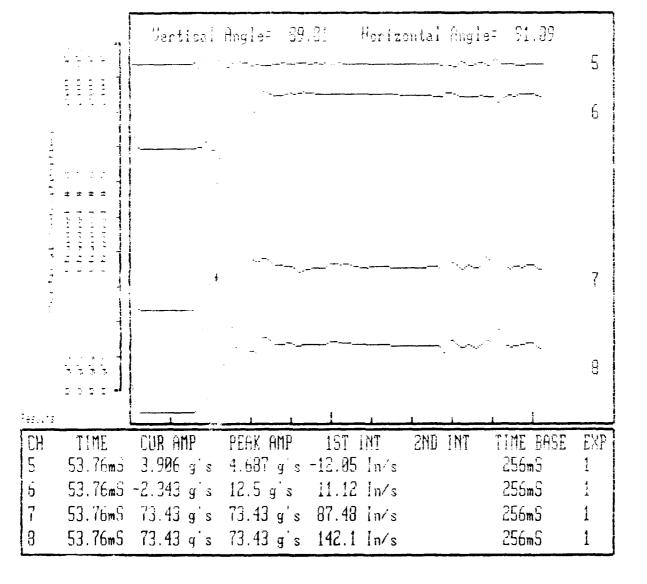
### Remarks

High Explosive Arti-Armor Rocket Shipping and Storage Container (CNd-480/E). Fed-Std-101. Method S007, Free Fall Crop Test, Procedure G. Brop Height 18 In. Amb. Temperature. Bottom Face J. Upper Starboard Accelerometer: Sb 1 - Vert. Cb 2 - Long. Sb 3 - Trans. Cb 4 Resultant. Filtered LP 125 Hz -3 db.

## Waveform Test Report AFPEA: HO AFLC/DSTZ, TRIAD II-E

Test Ident: AF PACKAGING EVAL AGENCY Date of Test: 03-10-1990

Measurement Constants:	-1. <u>-11</u> -			<u></u>
Thanabubak Dutbur	English val	i 8 ×0:1	E.,; : .:::	
lat untegral ácaver	Title*	<del>7:</del> , •	Ist	īdt.÷
Ima unteșnal Boaler			•	



## Remarks

High Explosive Anti-Armor Rocket Bricology and Bronage Container (CNU-480/E). Red-Std-101. Method 5007. Free Fall Drap Test. Procedure 8. Drap Height 18 in. Amb. Temperature. Side Page 1. Lawer Bort Accelerameter: Oh 5 - Long. In Jewert. Sh 3 - Trans. In 3 - Resultant. Filtered ER 125 Hz =3 db.

## Waveform Test Report AFPEA, HQ AFLC/DSTZ, TRIAD II-E

Test Ident: AF PACKAGING	EVAL AGENCY	Date	of Test: 0	03-10-1990
Measurement Constants:	<u> </u>	<u> </u>	- <del> </del>	<u>5 4 2 </u>
Thansdecen Cutout Det Integnal Stalen Zho Integnal Scalen	5%ç s Veit 380.4 1	50.g/s/Velt 356,4 i	Evig a 125 Est.4 1	50,g s:Valt 33a.4 -
Vertical Angle	= 96.73 H	lorizontal 🤲	gle= 08.95	
				4 hi
992	- •			· · · · · · · · · · · · · · · · · · ·
				der Berinningen
* = * =	1			#
				**************************************
Channel Control of Channel Cha				# 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	- <u>,</u>		<b></b> .*	
	·/			F 3
2 4 5 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5				)   
issuits	-			4
CH TIME CUR AMP PEAK	AMP 1ST I	TNI QNS TN	TIME BASE	EXP
1 16.38mS -10.15 g/s -10.19	g's 8.655	ln/s	256mS	•
2 16.38mS 1.562 g s 9.379			256mS	1
3 16.38mS 85.93 g's 85.93	-		256mS	1
4 16.38mS 87.5 g's 87.5	g's 190.4	ln/s	256mS	1

#### Remarks

High Explosive Anti-Armor Pocket Shipping and Storage Container (CNU-480/E). Fed-Std-101, Method 5007, Free Fall Drop Test, Procedure 3, Irop Height 13 In. Amb. Temperature, Side Face 3, Coper Starboard Accelerameter: 15 1 - Jent, Ch 2 - Long, Sh 1 - Thans, Sh 4 - Longitudinal, Filtered LF 125 do -350.

# Waveform Test Report AFPEA; HO AFLC/DETZ, TRIAD II-E

Test	Ident:	AF	PACKAGING	EVAL	AGENCY	Date	Ωf	Test:	03-10-1990
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Measi	urement	Constants	3 6	1 2 2	<u> </u>		<u>55 4 5</u>		<u>7. ≇ 8.</u>
	Transducer (12 1et (n'tegra) Ind (n'tegra)	Scaler		50.g s vsl: Céava	IV. II:	i a Volt ,4	50.; 78e. 1	p s 7.51t ,4	51.g s Volt 385.4 •
	N R - 3	Vertical	flag:e=	74 90 11:07	Huriz	onta!	Angle:	36.82	a churus phaggaris de
·	the transfer of the transfer o	·			<u>-</u>			\ 	F.7.
ens then the	1	•	 			_~_		············	
See to at year	A COLUMN TO THE		·, 	, <u>-</u> _					[*
Resolats		`		·					
CH	TIME	CUR AMP	PEAK AM	P 1ST	THT	SND	INT T	IME BASE	EXP
5	53.76mS	29.68 g s	_		In/s			256mS	1
6	53.76mS	13.28 g/s	_		In/s			256mS	1
7	53.76mS 53.76mS	13.28 g's 37.5 g's	_		l In/s l In/s	المناوات ا		256mS 256mS	The state of the s

#### Remarks

High Englosive Anti-Armor Rocked Shipping and Ethnade Container (CN6-45) Eth. Fed-Station. Method 5 17. Free Paul Crop Test. Procedure 6. Grop Height 16 In. Amb. Temperature, Currer 1 Ind. Lower Fort Accelerometer: Ch 5 - Long. Ch 5 - Vert. Ch 7 - Track, Ch 8 - Resultant, Filtered LP 125 Hz -3 db.

# Waveform Test Report

Test Ident: AF PACKAGING EVAL AGENCY Data of Test: 03-10-1990

Measurement	Constants:	<u> </u>	11 15 # 1		<b>4</b> 7	- 4 -
Transdeden S Ust Integral End Integral	Boaler	57. 78:		ng a veit E.4	57.00 (\$475)0 780 (# 1	Divolation DBB 4
Hardware and American State of the Company of the C	Vertical An	gle= bi	.39 Heri:	<b>zonta</b> l Ang	ne= 34.95	To the distribution of the control o
		المستعمرين	-^		<del>-</del>	The second secon
Vertical Sectionality of the Character # 4 Character		~ ` ~				
A Sepulta	<u> </u>		<u>-</u>			- F-
CH TIME 1 12.28mS 2 12.28mS 3 12.28mS 4 12.28mS		.96 g's	35.54 In/s		TIME BAS 256mS 256mS 256mS 256mS	E EXP

#### Remarks

High Explosive Anti-Armor Rocked Shipping and Storage Container (CNU-480/E), Fed-Std-101. Method 5007. Free Fall Drop Test. Procedure 6, Orop Height 18 In. Amb. Temperature, Corner 2-3-5, Opper Stanboard Accelerometer: Ib 1 - Vert. Ch 2 - Long. Ib 7 - Trans. Ib 4 - Resultant, Filtered LP 125 Hz -Idb.

## Waveform Test Report AFPEA; HQ AFLC/DSTZ, TRIAD II-E

Test	Identi	4F	FACHABILIS	EVEL	43427	Date	⊃f	Test:	03-10-1950

*7	urement Constants:				<u> </u>
	Torrito Cons	57.0 ≤ 115		finte di	fuga viit
	lat ittariku Brajan	E. F	TE due	1 <b>1</b> 1.1	TE: 4
	lma Yomes 4. Box.ak				

	•	Version, tyles 115.1 decisions	tai Angle=	229.7	
				***	Ľ.
	# # # # # # # # # # # # # # # # # # #		<del></del> .	<u>-براي</u> ب	5
-		**************************************	<del></del>	1,541,	<b>.</b>
÷	,	÷			
				rege Trans	8
I.11				•	
CH E		EUR HMP		ME BASE 256mS	EXP 1
<u>۔</u>	62.46mS	-5.463 g's -18.75 g's -64.91 In/s	3	256mS	1
7		11.71 g/s -11.71 g/s -9.892 ln/s		256mS	1
8	62.46m5	40.62 g's 40.62 g's 133.5 In/s	ä	256mS	1

## Pemarks

High Evolosive Achievando Higher Enlocady and Elonado Container (CNUH43) EN, RecHBidHidi, Method S. N. T. He Hall Good Tast. Procedure G. Grow Height 18 la. Aso. Temperature. Current. ArG. Lawer Port Accelerometer: Ch.S. H. Long. Sh.s. H. Vert. Th. T. H. Truns. On S. H. Resultant. Politered ER (105 Hz. HZ. ob.

# Waveform Test Report AFPEA; HQ AFLC/DSTZ, TRIAD II-E

Test Ident:	AF PACKAGING EV	AL AGENCY	Date	of Test: O	3~10−1990
Measurement	Constants:	CF # 1 2	: <b>!</b> ]		# 4
Transoldar G ist Integral Ind Integral	Scaler	Eligia velt 785.) 1	5).grs/Valt 785.4 1	50.5 s.volt 750.4 :	Edig sivelt Desi <sup>2</sup>
	Vertical Angle=	113.8 H	orizontal Ang	(le= 210.4	er entrementer entrementer
111111111111111111111111111111111111111		*/*	·		4
		·~		المن عودات	
Ver tradical Section thrace Control 18 3 (Francisco B. S. Control 18 3) (Francisco B. Control 18 3) (Francisco B. Control 18 3)	<b>-</b>	····			And the second s
					Anthonormal property of the control
2 13.82mS	CUR AMP PEAK AMP-15.62 g's -15.62 g's -30.46 g's -30.46 g's -23.43	g's -21.02 I g's -61.20 I	n/s n/s	TIME BASE 256mS 256mS 256mS	EXP

#### Remarks

High Explosive Anti-Armor Rocket Shipping and Storage Container (CNU-480/E).

Red-Std-101. Method 5007. Free Fail Drop Test, Procedure 3, Drop Height 13 In.

Amb. Temperature. Corner 1-4-5, Spec Starboard Accelerometer: This - Jert.

Ch 2 - Long, Ch 3 - Trans. Ch 4 - Resultant. Filtered 18 125 Hz -3 pb.

256mS

13.82mS 37.5 g's 37.5 g's 70.17 In/s

## Waveform Test Report AFPEA: HO AFLC/DSTZ, TRIAD II-E

Test Ident: AF FACKAGIN	B EVAL AGENOY	Date of Test: 03-10-1990
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10 as.	urement	Constants:		<u> </u>	·	<u> </u>	<u> </u>
	Transcussin 1. 1sc Integral Inc Integral	Boaler	1 (1 112)	1 1.1 f	. s volt d	Sivila (1): TB:x4	2042 € 1 7524 2
	<b>=</b> 3	Merilous arg e	95	Y nizent	a. mmgle≕	173.2	Annah Common Change
	1714.		*	الميسان المحاسبية يست			C.F.T
11.000.1	T + H		······································	··· ··· ·· · · · · · · · · · · · · · ·		······································	
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; ;		÷	- <sub>]</sub>				000
esults					_ii_		edit i i i i v primi di generali
СН 5 6 7 8	63.09m5 68.09mS 68.09mS	UUR AMP PEAK 1.562 gis -4.687 -43.75 gis -43.75 -18.75 gis 20.31 46.87 gis 46.87	g s - 6 g s - 6	2.473 In/s 242.3 In/s 10.20 In/s	EMB INT	TIME BASE 256mS 256mS 256mS 256mS	EXP 1 1

### Remarks

High Explorate Anti-Anton Contet Bricolog and Bhorsol Container (CMU-480/E). Fed-Atd-101. Method 3 00 Pine Fall Bros Tash. Procedure 3. Drop Height 18 In. Ast. Famoenature, Top Page 1. Eawer Port Accelerameter: On 5 Hillorg, Chila Hilest. On 5 Hillorg, Chila Hillston. The Trans. On 5 Hillston. Piltered UF (25 Hole Hillston.

## Waveform Test Report AFPEA, HO AFLC/DSTZ, TRIAD II-E

Date or Test: 03-10-1990

Test Ident: AF PACKAGING EVAL AGENCY

7- - 1 [8 # 1 | 25 # 2 Measurement Constants:  $\overline{z} = \sqrt{c_1 t}$ for restrict Transqueen Dittolt I was also 500: a Valt 75:14 15:.1 78:14 tat Integral Boaler 73:.4 Ont Integral Staler Vertical Angle: 159.2 Horizontal Angle= 60.81 - - - -

Pagn.12							<u> </u>
(11	FIAT	CUR AMF	PEAK AMP	15T INT	Ini dus	TIME BASE	EnT
	11.26m5	-52.34 g s	-52.34 g/s	-90.68 In/s		256ომ	1
2	11.26mS	3.125 g/s	-5.468 g's	-1.236 In/s		256mS	1
3	11.26mS	19.53 g's	13.53 g/s	2.163 In/s		256mS	1
4	11.26m5	55.46 g's	55.46 g's	90.88 In/s		256mS	1

### Remarks

5 5 5 5 **-**

Hugh Elouse,ve Anty-Annor Forket Shipping and Storage Contester (UNI-487/E). Fed-Stora 1. Method 5 17. Free Fall Crub Test, Procedure 3. Onto Heyont 18 Uni-480. Temperature: The Face 1. Loper Standbard Accelerameter: In 1 Elevent, In 2 Long, In 7 - Thank In 4 - Resultant, Politared 18 125 Hole? Do.

# Waveform Test Report AFPEA; HQ AFLC/DSTZ, TRIAD II-E

Tesh Ident:	AF FACMAGING EV	AL AGEMO	Y D	ate of Te	st: 03-10-	-1990
Measurement	Constants:	]- <b>4</b>	<u> </u>		<u> </u>	
Theres sen 1 Let untegres Inc Integres	Rosier	Solvene velt Mesod		50t 50v2 a 755v4 1	VENT E VÇ € 78274 1	i.t
	Wentical Angle:	62.97	Herizonta	l Angle≃ 5	27.3	and the same of th
1 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-		·		.r 5	e de
1		مرادی در است. این از این در است. این در این د	······································	······································	5 5 7	Andread and the second and the secon
				<del></del>	- 93	
57.85mS 7 57.85mS	CUR AMP PEAK AMP 29.68 g s 29.68 g s 24.21 g s 27.34 g s 42.18 g s 42.18 g	y's 62.75 y's 34.62 y's -29.36	Invs Invs Invs	1 INT ILME 256 256 256 256	5mS 1	

#### Remarks

Hum 3 ploate Anti-Arron Accept Shipping and Storage Container (CNC-48) E Ped-Sto-101, Method of Free Tail Orde Test, Procedure 3. Orde Height 18 Inv Ard. Tamberature. Conter Trans. Lower Fort Accelerometers (CN 5 - Long. CN 5 vent. In 7 - Trans. In 8 - Resultant, Pultered of 125 Hz -135.

## Waveform Test Report AFPEA, HQ AFLC/DSTZ, TRIAD II-E

Test Ident: AF PACKAGING	EVAL AGENCY	Date of Test:	03-10-1990
Measurement Constants:	<u> 25 # 1                                 </u>	7. 4 7	<u>75 # 4</u>
Transpuder Dutput (ap Ontegra) Spaler		va sivala — Elva sivala. 6,4 — Esp.4	
2nd Indegnal Boaler	;		:

		Vertical Angle= 80.15 Horizontal Angle=	319.4	Più de que conquesto con con
	13112		en generalis	4-7-4
	The control of the co		_ `~	7
11 20010	Francisch Francisch Francisch		,	ന
Ver the	and the control of th	•		Transport to the second of the
	(1 - 1) (2 - 1) (3 - 1) (4 - 1		المراسية	
	Ļ		i	
H			ME BASE SomS	EXP 1
) •		•	.56mS	1
}		9	56mS	1
1	10.24mS	35.93 g/s 35.93 g/s 64.60 In/s 2	56mS	1

### Remarks

High Elgussive Anti-Armar Apovet Brigging and Starage Container (CNU-48) 8 Fed-Sta-0 1. Method 5:07. Free Rail Coop Test. Procedure 3. Toro Height 13 liv. Ass. Temperature, Sparier 3-4-5, upper Standbard Appelerometer: This is a ventu-Chi 2 H Long, Chi 3 H Thans, Chi 4 H Resoltant, Pulteres LA (20 Hz H) st.

# Waveform Test Report AFPEA, HQ AFLC/DSTZ, TRIAD II-E

Test Ident: AF PACKAG	ING EVAL	AGENCY	Date	of Test: (	3-10-1990
Measurement Constants	:	:	# <u>=</u>	<u> </u>	1:
Thanababen Batout Mat Integnal Boalen Dha Integnal Boalen	E1. TE4 1	Ç akkılı ,≓	fing forzit Table 1	Ewg a Volt TEC 4 1	Sing actain Saar4 T
Vertical	mngle= 13:	3.4 Her	icontal fin	gle= 116.3	***************************************
110.7	-				[]]
					5
	<b>,</b>				A. a. an an experience of the second and an analysis of the second and analysis of the second and an analysis of the second analysis of the second and analysis of the second and an analysis of the second and an analy
Facility and the second of the					
CH TIME CUR AMP	PEAK AMP	1ST INT	ZMD INT	TIME BASE	EXP
5 58.88mS -32.81 g's - 58.88mS -14.84 g's -				2 <b>56</b> mS	1
	-			256mS	1
7 58.88mS 21.09 g's	=			256mS	1
8 58.28mS 40.62 g s	40.bረ g s	94.30 In	′ S	256mS	1

### Remarks

High Explosive Anti-Arbir Robbet Shipping and Storage Container. INC-48115 . Feb-Std-111. Method 5 V7. Free Fall Drug Tast. Procedure 8, Drop Height 18 Inc. And. Temperature. Connex 1-2-5. Lower Nort Acceleroweter: ON 5 - Long. On a - Vent. Of 7 - Trans. In 8 - Resultant. Filtered LF 125 Hz -3 db.

## Waveform Test Report AFPEA; HO AFLC/DBTZ, TRIAD II-E

Test ident: AF PACK	AGING EV	AL AGENO	ΞY	Date (	of Test:	03-10-1990
Measurement Constan	ts:	<u> </u>	75.4.7		<u> </u>	<u>05 4 4 </u>
Thereology Dictor (gr. Integral Scaler Dro Integral Scaler		50,0 50/01 73: 4 :	: E . 784.	5 3 NOCE ,4	51.p % volt 755.4 1	50.g/s/Valt 78a.4 1
Vertice	l Aayle:	115.8	Horico	ntal fing	le= 136.6	17.2
9 9 5 1		·	<u>.</u>	<del>-</del>		1
	_	. * <u> </u>				2
	·					J
5 5 5 5 <b>-</b>	· · · · · · · · · · · · · · · · · · ·	·				4.1 4
CH TIME EUR AMP 1 9.727mS -18.75 g 2 9.727mS -28.12 g 3 9.727mS 26.56 g 4 9.727mS 42.96 g	s =18,75 g s =29,68 g s = 26,56 g	y's -64.29 y's 40.49	? In/s } In/s } In/s	THI DAS	TIME BAS 356mS 256mS 256mS 256mS	E EXP

#### Remarks

High Evolutive Anti-Honor Richet Phispsing and Storage Juntaider (CNU-481 E). Fed-Stor-Mi. Method 5 v7. Free Fall Broo Test. Procedure 3. Shoo Height 18 in. Amb. Temperature, Corner 1-2-5. Voicer Starboard Accelerateter. Childhiert. This Holland, 15 ve. 15 4 Hones Starboard Accelerateter.

## Waveform Test Report AFPEA; HQ AFLC/DSTZ, TRIAD II-E

Test Ident:	AF FACKAGING EV	AL AGEMOY	Dat	e of Test: (	:3-1 '-1FPG
Measurement	Constants:	<u>. <del>.</del> </u>	:- <u> </u>	<u> </u>	<u> </u>
Tranaducan I Iao Indaghal Ind Indaghal	Boar	Illo e com Terve	1 (1 4 (5) 78±44 1	: un a velt 755.4 :	5 vh ( 2.1 382,4 1
	Vertical drgle=	171 C F	lorizontal :	hogle= 105.9	:
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2010 11 11 11 11 11 11 11 11 11 11 11 11		,			5
				٠	
	•	•			.05
er.h		<u> </u>	<del></del>		
5 62.97mS 5 62.97mS 7 62.97mS	CUR AMF PEAK AM -32.03 g/s -32.03 g 7.031 g/s 7.031 g 1.562 g/s -10.93 g 33.59 g/s 33.59 g	//s -109.1 //s -2.163 //s -29.36	In/s In/s In/s	TIME BASE 256mS 256mS 256mS 256mS	EXP 1 1

### Remarks

Hugh Elousauve Entur-Inton Fociet Shindund and Starage Container (CNJ-42) S., Fed-Bio-101. Method Swift, Free Fall Ordo Test, Procedure 3. This Height 13 in. Amb. Temperature. Forward End Face S. Lower Fort Hipelerometer: In S. H. Lond. Oh a. H.vent, Jr. 7 - Trans. In 3 - Resultant, Filtered LF 105 Holl-7 do.

# Waveform Test Report AFPEA, HQ AFLC/D8TZ, TRIAD II-E

Test Ident:	AF PACKAGING EV	'AL AGENCY	Date	of Test: 0	3-10-1990
Measurement	Constants:	7-4:	• # `	· s ]	= 1
Pransqueen 3 Sat Sotegrai Ont Integrai	369196	Elvera vele 786.4 1	50.5 % Mele 788.4 1	Elverendele Jesua 1	51,; s vzlt 75:4 1
	Vertical Angle=	99.31 H	orizontal Ang	gle= 180	The company of the contract of
1180 X			<del></del>		*
1 # 3					The second of th
Control of the contro	4	`		بحسيب	(C) )
				·	A
Results					
CH TIME 1 12.8mS 2 12.8mS 3 12.8mS	UUR AMP FEAK A .7812 g's 7.031 -26.56 g's -26.56 0 g's -7.812	g's 2.473 l g's -74.19 l	n/s n/s	TIME BASE 256mS 256mS 256mS	

## Remarks

High E plosive Anti-Armor Roovet Enlocking and Storage Container (IND-480°E). Fed-Std-101. Method 5007, Free Fall Drop Test, Procedure 8, Ordo Height 18 in, Amb. Temperature, Forward End Face 5, Upper Starboard Accelerometer: On 1 - Vert, Ch C - Long, Ch C - Trans, Ch 4 - Resultant, Filtered LP 125 -b -7 db.

12.8mS 25.78 g's 25.78 g's 68.62 In/s

256mS

# Waveform Test Report

Test Ident: AF PAC	CAGING EV	AL AGENC	λ D	ate of Tes	t: 03-10-199
Measurement Constan	nts:	1 = 1	<u> </u>	<u> </u>	<u> </u>
Transpuder Dutput Dat Entagnal Boaler End Intachal Boalar		51,7 s >5.1 795,4 1	E va e : 73€,4	514 5149 6 74 78674 1	5);; 5);; s valt 586;4 1
<u> </u>	al Angle=	192.8	Horizonta	l Angle: 54	6.7
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			<u></u>	سامريان محسانيسيس	.— 5
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To the state of th	: \$				ediganisticion of the paragraphs
				11	
		:}			
5 5 5 <b>-  </b>	: المراجعة المراجعة المراجعة المراجعة ا	مان المان المان مال المال المال			
4955) hs					
CH TIME CUR AMP 5 56.83mS -2.343 g	PEAK AM 's 5.25 g'			INT TIME 256m	
1	s 5.25 g 's 81.25 g			256m	
7 56.83mS 11.71 g	's 12.5 g'	s 44.32	ln/s	256m	S 1
2 56.83mS 82.03 g	s 82.03 g	's 129.5	ln/s	256m	S 1

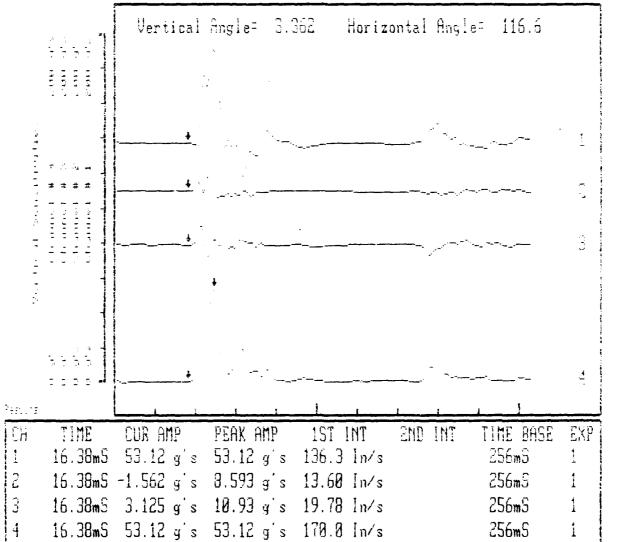
### Remarks

High Explosive Anti-Armor Pocket Emipping and Storage Container (CNU-450/E). Fed-Std-101. Method 5-07. Free Fall Drop Test. Procedure 5. Broo Height 18 in. Amb. Temperature. Bootom Page 3. Lower Port Accelerometer: CS 5 - Long. On a Vert. CS 7 - Trans. CB 3 - Resultant. Filtered LF 125 Hz -3 db.

## Waveform Test Report AFPEA: HG AFLC/D8TZ, TRIAD II-E

Test Ident: AF PACKAGING EVAL AGENCY Date of Test: 03-10-1	-Test Id/	ent: AF	PACKAGING	EVAL	AGENCY	Date (	Ģ÷	Test:	03-10-19
--	-----------	---------	-----------	------	--------	--------	----	-------	----------

Measurement Constants:	<u> </u>	[a # [	[- a ]	<u> 25 # 1 </u>
Tranequoen Gutost 1et Integral Boaler		50.g s /bit 386.4	574g s Volt 78a.4	Elvi a volt Teva
Inc Integral Sosiem	:	•	:	:
11 1 2	1 0.000		) I - 11C :	,



#### Remarks

High Explosive Anti-Armor Pocket Shipping and Storage Container (ENU-480/E). Fee-Sto-101. Method 5007. Free Fall Crop Jest, Procedure 3, Iron Height 18 In. Amb. Temperature. Spitom Face 3. Upper Starboard Accelerometer: (Ch. 1 - Vent. Ch. 2 - Long. Ch. 3 - Trans. Ch. 4 - Resultant, Filtered LR 125 Hz -7 db.

Test Sequence 22, Fed-Std-101C, Method 5007.1, Free Fall Drop Test, 6.3,

Procedure G, Ambient Temperature	Temperature,	18 Inch Drop Height,	Height, Filtered	, 18 Inch Drop Height, Filtered 290 Hz L.P.
Container Orientation		Peak Acceleration	tion	
Accelerometer	Vertical Gp	Transverse Gp	Longitudinal Gp	Resultant Gp
Bottom(3)				
Lower Port	80.5	0.8		80.5
Upper Starboard	70.3	<b>6.</b> ∃	2.3	70.3
Port Side(2)				
Lower Port	5.5	•	3.1	80.5
Upper Starboard	6.2	9.76	4.7	97.6
Corner 2-3-6				
Lower Port	16.4	9.4	39.1	•
Upper Starboard	23.4	23.4	20.3	38.3
Corner 1-4-5				
Lower Port	18.8	21.9		9
Upper Starboard	21.9	24.2	35.2	46.1
Top(1)				
Lower Port	48.4	17.2	1.6	•
Upper Starboard	60.2	7	6.2	64.8
Corner 3-4-6				
Lower Port	27.3	25.8	33.6	50.0
Upper Starboard	9.4	ά.	26.6	39.1
Corner 1-2-5				
Lower Port	20.3	25.0		48.4
Upper Starboard	24.2	35.9	27.3	50.0
Forward End(5)				
Lower Port	14.8	5.5	33.6	36.7
Upper Starboard	1.6		27.3	26.6
Bottom(3) 2 nd Drop				
	99.5	4.7	3.9	99.2
Upper Starboard	57.0	7.0	5.5	•

## Waveform Test Report AFPEA: HQ AFLC/DBTZ, TRIAD II-E

Test Ident: 6: PACKAGING EVAL AGENCY Date of Test: 07-10-1990

Measurement	Constants:	<u> </u>	25 # s	<u> </u>	<u> Ch # 8</u>
Transcucer 3: Sac Integral Inc Integral	Boaler	Elig affelt Jarua I	50.g =1751 788.4 1	: \$10\$7\$7021t 75\$44 1	50.5 a 21t 755,4
**************************************	Vertical Angles	101.0	Horizontal	Angle= 168.	[
Wern thought Control throughten. Changing H. C. Chingmed H. C. Chingmed H. C. Chingmed H. C. Chingmed H. C.		and the second seco	ر می در در رسید مصنوعی می در در در می	ا الماديدين الماديدي	
Personal and the second				The second secon	(0)
6 63.48mS 63.48mS	CUR AMP PEAK AMP -7.031 g's -10.15 g -80.46 g's	y's 2.473 y's 102.0 y's 9.273	In/s In/s In/s	INT TIME BA 256mS 256mS 256mS 256mS	SE EMP

### Remarks

High Evalosive Anti-Armor Rocket Shipping and Storage Container (CNU-480/E). Fed-Std-101. Method 5007. Free Fall Cros Test. Procedure 9. Bros Height 18 In. Amb. Temperature. Pottom Face 7. Lower Port Accelerometer: Ch S - Long. Ch S - vert. Ch T - Trans. Ch B - Resultant. Filtered EP 290 Mz -7 pt.p.

## Waveform Test Report AFPEA; HG AFLC/DSTZ, TRIAD II-E

Test Ident:	AF PACKAGI	ING EVAL	AGENCY	Date of	Test: 0	3-10-199
.Teasurement	Constants:	<u> </u>	: := : :		<u> </u>	<u> </u>
Thanspuper I let Integral Inc Integral	Boaler	51, 788 1	5 6 MESE	.g/18/75211	,;\s/V61t s.4	51.: i valt 38€/÷
(1) (1) (1) (2) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	Vertisal (	Angle= 3.5	196 Heriz	ontal Angle=	238.9	TO A STATE OF COMPANY TO ASSESSED THE TOTAL PROPERTY.
Mari las del contro altroglas.  Transfer   H   S    Transfer   H						
Pessións		The state of the s				
3 12.28mS		42.18 g's	15.76 In/s		TIME BASE 256mS 256mS 256mS 256mS	1

## Remarks

High Emplosive Anti-Armor Rocket Shipping and Storage Container (CNC-450/E). Fed-8td-101. Method 5007. Free Fall Droc Test. Procedure 3. Onco Height 18 in. Amb. Temperature. Bottom Face T. Upper Startbard Accelerometer: Chillett. Chill - Jent. Chill - Long. Chill - Trans. Chill Resultant. Filtered LP 270 Hz -3 ob.

## Waveform Test Report AFPEA, HQ AFLC/DSTZ, TRIAD II-E

Test Ident:	AF PACKAGING EV	AL AGENCY	Date	of Test: (	)3-10 <b>~19</b> 90
Measurement	Constants:	<u>[- = [</u>	· · <u> </u>		- + <u>-</u>
Pranazycen Cl Cab unbashal Cha unbashal	Boalar	51.g s/3011 186.4 1	51.g s Velt JEs,4 1	51/g a//zir 33:14	51vo s voit 18eva 1
	Vertical Angle=		orizontal An		
1869					6
1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	( ) ( )				The state of the s
	¥ constants	and the second seco	and the second s	e gal <sup>an</sup> a ay <del>ay ma</del> ga	
	<del></del>	garage and a second of the later of the late	THE STATE OF THE S	again ( James )	170
S S S S S			1		
5 54.78mS 5 54.78mS	CUR AMP PEAK AM 3.125 g's 8.593 g -5.468 g's -5.468 g 80.46 g's 81.25 g	g's -7.109 g's 2.782	ln∕s In⁄s	T TIME BASE 256mS 256mS 256mS	EXP 1

#### Remarks

8

High Electrics we entire Armon Rocket Entoring and Storage Container (CND=450.5). Fed-Std=101. Method 50-7. Free Fall Drop Test. Procedure 6. Grop Height 15 Inc. Amb. Temperature. Side Face 2. Lower Fort Accelerometer:  $05.5 \pm 0.01$ ,  $05.5 \pm 0.0$ 

256mS

54.78mS 80.46 g's 81.25 g's 165.0 In/s

# Waveform Test Report

Test Ident: AF FACKAGING EVA	AL AGENCY	Date of Test:	07-10-1990
'casurement Constants:	<u> </u>		<u> [1: 1 1 1                             </u>
Thanspuren Sutbub (st Imtegna) Boalan Inc Intagnal Boalan	f (g a vint	g a volt — 51,5 av alt — 14 — 78a.4 1	English till Design
Uertical Angles	93.65 Horiz	ontal Angle: 87.15	į.
	· •		-1
		anna ar ann an Airean Canaille ann an Aireann an Aireann an Aireann ann an Aireann an Aireann an Aireann an Ai	
1		e <sub>pe</sub>	
	والمحادث والمحادث والمحادث المحادث	<del></del>	0.0
3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	· · ·	/ / / / / / / / / / / / / / / / / / /	4.
CH TIME CUR AMP PEAK AM		2ND INT TIME BAS	SE EXP
1 16.38m5 -6.25 g/s 13.28 g		256mS	
2 15.38m3 4.687 g's 14.06 g		256mS	
3 16.38mS 97.65 g's 98.43 g		256mS	1
4 16.38mS 97.65 g's 98.43 g	s 190.4 in/s	256mS	1

### Remarks

High Explosive Anti-Armor Rocket Shipping and Storage Container (CNU-480/E). Fed-Std-101, Method COOT, Free Fall Broo Test, Procedure S. Brop Height 13 In. Amb. Temperature. Side Face 2, Woper Starbbard Accelerometer: Chill - Vert. Chill - Long. Chill - Trans. Chill - Longitudinal, Filtered LP 290 Hz -Job.

# Waveform Test Report AFPEA, HQ AFLC/DSTZ, TRIAD II-E

Test Ident:	AF PACKAGING EV	AL AGENCY	Date	of Test: (	Œ-10-1950
Measurement	Constants:	<u> </u>	- <del>i</del> ;	· : *	<del>- ‡ -</del>
Transtican ( 1st Invectal Int Integral	Edalar	50.5 i vilt 188.4 1	5145 8 4515 38574 1	Elve e velt Elve P	1.41 8 1.1 185,4
<b>-1</b>	Vertical Angle=	78.79 h	orizontal do	gle= 36.32	
The state of the s		-	·	المناسبة والمناسبة والمناس	5
10 1 10 10 10 10 10 10 10 10 10 10 10 10			and the second and th		
Verifical section of the Charles of	4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ing and the second seco	eternet terrepresentation (j. 1811).	·	C
1		e e e e e e e e e e e e e e e e e e e	· <del></del>	annon politica -	C. 1
ì	CUR AMP PEAK AM 39.06 g's 39.04 g 16.40 g s 36.71 g 9.375 g's 23.43 g 42.96 g's 43.75 g	gʻs 39.25 I gʻs 48.84 I gʻs 32.45 I	n∕s n∕s n⁄s	TIME BASE 256mS 256mS 256mS 256mS	EXP

### Remarks

High Euclosive Anti-Human Radied Enicoding and Storage Container (Chd-480/E).
Fed-Btd-101, Method 5:07, Free Fall Ordo Test, Procedure 8, Ordo Height (5 1),
Hab. Temperature. Surner China, Lower Port Accelerometer: Sh 5 H Long. Ch a Hovert. Ch 7 - Trans. Ch 8 - Resultant, Filtered LA CAC House

# Waveform Test Report

Test Ident: AF PACKAGING EVAL AGENCY Date of Test: 03-10-1990

≓eas(	urement	Constants	<u>.</u>	<u> </u>	-	7- = 7	<u> </u>
	Therei den D. Den Dineghal Din Onnechal	Edite	1 13 1	41 1 11 11 11 11 11 11 11 11 11 11 11 11	110: # 11: 18:.4 :	E value valit Seave	5 / 1 ( ) 788
	A second	Wartisal	Angle: 52	in de	izontal An	gle= 49.82	
: :				er en	. <u></u> ,		
10.00		3,					co por
: Resturs		÷					a 4.
5H .	I:ME 5.656mS 6.656mS 6.656mS	20.31 g's	PEAK AMP 23.43 g s 21.09 g s 24.21 g s	19.47 In	s ·	TIME BAS 256mS 256mS 256mS	E EXP

### Remarks

High Explosive Hhttp-Anner Rooked Shipping and Storage Container (Chur460/E). Red-Std-111. Method 1807, Free Fall Iron Test, Procedure 3. Iron Height 13 Iron Hack Temperature. Content India. Moder Standard Accelerometer: St 1 - Vent, It is some India. Sh 3 - Irans, Sh 4 - Resultant, Fillered of 170 Moderation.

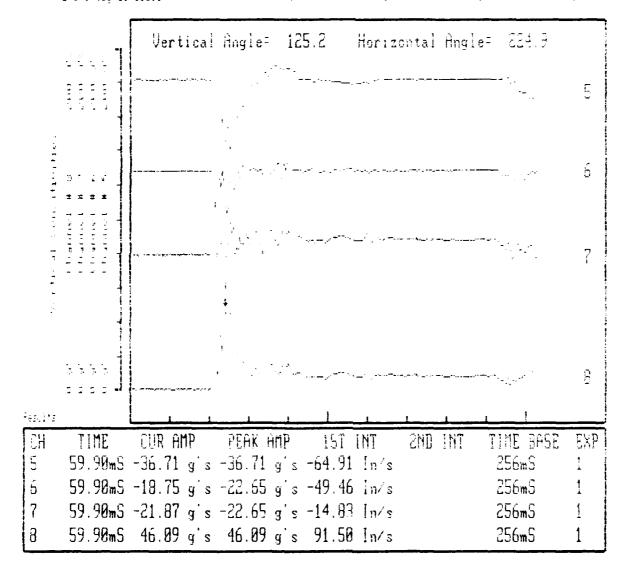
6.656mS 38.Lu g's 38.28 g's 34.31 In/s

256mS

## Waveform Test Report AFPEA; HO AFLC/DBTZ, TRIAD II-E

Test Ident: AF PACKAGING EVAL AGENC: Date of Test: 03-10-1990

Measurement Constants:	] - <u>s</u> =	· · ·	<u>-                                    </u>	<u> </u>
Thaneswish Sutsum		Eigh a bit		::::::::::::::::::::::::::::::::::::::
jat integral Boaler	754/4	735,4	785.4	788.4
"no interes! Acales	:			



#### Remarks

High Elolosive Anti-Arnor Rocket Enlocing and Storage Container (CNU-480/E). Red-Std-101. Method FMMT. Free Fall Iron Test: Fracedure R. Orne Height 18 in. Info. Tomperature. Sonder 1-4-5, Lower Port Acceleraneter: Ch(S) = Long. Ch(S) = Vert. Ch(S) = Trans. Ch(S) = Resultant. Filtered EP 190 Az = 3 db.

## Waveform lest Report AFPEA; HO AFLC/D872, TRIAD II-E

Test Ident: AF FACEAGING EV	AL AGENCY	Date of Test:	03-10-1990
Measurement Constants:	<u> </u>	[- <del>  ]</del>	7- 4-2
Transcuser Iutout tet Integnal Eurush Int Integnal Fosler	81,, a 2,7 81,, 287,4 782,	a volt – Singla olt Pagna	Sivelekusit Seve
	117.8 Horizo	ntai Angle= 214.	
	· · · · · · · · · · · · · · · · · · ·		-
			3
	en germanen er et et en	- <u> </u>	C3
	the state of the s	Strag Service Stranse (Methodological Stranse) (Strag Service)	4.14.
CH DIME OUR AMP PEAK AN	MP IST INT	2ND INT TIME BA	PSE EXP
14.33mS -21.87 g/s -21.87		256mS	4
2 14.33mS -35.15 g's -35.93	g's -69.24 in/s	256mS	<u> </u>
3 14.33m5 -24.21 g/s -32.81 g	=	256mS	1
	g's 73.89 In/s	256m9	1

### Remarks

High E plastie Anti-Armor Rocker Bhissing and Etorage Octtainer (CNU-A20/S).
FeshOtomini, Method 5007, Free Fall Brook Test, Procedure G. Crook Height 18 In.
Amb. Temperature. Corpner 1-4-5. Jopen Startband Accelerometer: In 1 - Vert.
Ch 2 - Long, Ch 3 - Trans. Ch 4 - Resultant, Filtered LP 290 Hz -7 db.

# Waveform Test Report AFPEAL HQ AFLC/DBTZ, TRIAD II-E

Test Ident: AF PACKAGING E	VAL AGENC	Y Dat	e of Test:	03-10-1990
Measurement Constants:	<u> [4 # 5</u>	<u> 25 # a</u>	<u> </u>	<u> </u>
Thanadecen Cutout (st Integnal Scaler Dro Integnal Scaler	50.g/s/Valc 396.4 1	50.g a/Vait 78a.4 1	50.g/s Volt T8a.: 1	50.0 a voit 196.4 1
Vertical Angle	96.33	Horizontal i	Angle= 180	an dear ordinary to page
	Yhteen ja	د الله الله الله الله الله الله الله الل		
4 2 2 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				Bordinari Gina Massari Gin
	September 1984			
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	Salahangga <u>t</u> aya <sup>sala</sup> ngga salahang tayan	and the second seco		Andrew Constitution of the
	a jana sa		······································	Andrew States - Andrews (CCC)
	·		ě	The carties of the ca
5 5 5 5 -				And the second of the second o
Respire .			<u></u>	
CH TIME CUR AMP PEAK				1
5 68.09m5 1.562 g's -10.93 6 68.09m5 -48.43 g's -48.43	_		256mS 256mS	
7 68.09mS -17.18 g's 25.78	_		256mS	1
8 68.09mS 50.78 g's 50.78			256mS	1

## Remarks

Figh Explosive Anti-Armor Rocket Shipping and Storage Container (CNU-480/E). Fed-8td-101. Method 5007. Free Fail Drop Test. Procedure 6. Drop Height 18 In. Amb. Temperature, Top Face 1. Lower Port Accelerometer: Ch 5 - Long. Ch 6 - Vert. Ch 7 - Trans. Ch 8 - Resultant, Filtered LP 290 Hz -3 db.

# Waveform Test Report AFPEA, HQ AFLC/DSTZ, TRIAD II-E

Test Ident: AF PACKAGING EV	AL AGENC	Y 1	Date of	Test:	03-10-	1990
Measurement Constants:	<u> </u>	25 ± 2	<u> </u>		<u> </u>	
Themaquoen Dutout Set Indegnal Boaler Ont Indegnal Boaler	E4vg sivtit I2a,4 i	50.g s 18574 1	vala 51.0 788. 1	a a %alt ,4	77 : 2 : 789:4 1	eti:
Vertical fingle=	154 9	Horizont	ai Angle=	77.03	The Property of the State of th	
# # # # # # # # # # # # # # # # # # #	ريسي خريين يا الخسم		alana ang ang ang ang ang ang ang ang ang		2	
War Us at Young to the annual	again sa ann an ann an Aireann an				الري) الدين جيميد دين (يون)	
FEETL'S					A. A	
CH TIME CUR AMP PEAK AM 1 11.77mS -60.15 g's -60.93 g 2 11.77mS 6.25 g's -11.71 g 3 11.77mS 27.34 g's 30.46 g 4 11.77mS 64.84 g's 66.40 g	i's -101.3 i's -6.800 i's 7.109	In/s In/s In/s	, , ,	IME BASI 256mS 256mS 256mS 256mS	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

### Remarks

High Emplosive Anti-Armor Rocket Shipping and Storage Container (CNU-480/E). Fed-Etd-11. Method 5007. Free Fall Crop Test. Procedure 6. Drop Height 18 In. Amb. Temperature. Top Face 1. Coper Starboard Accelerometer: In 1 -Vert. Ch 2 cong. Ch I - Trans. Ch 4 - Resultant. Filtered 15 290 Hz -7 db.

# Waveform Test Report AFPEA: HQ AFLC/DSTZ, TRIAD II-E

Test Ident: AF PACKAGING EV	AL AGENCY	Date of Test: 0	3-10-1990
Measurement Constants:	<u> </u>	<u></u>	<u>#                                    </u>
Transcuter Duttut Dat Integral Boaler Doc Integral Boaler	50.g = 51t	a kala — 50.g ak‱16 75a.i 1	50.5 e/455t 755.4 1
\$ <del>\$ \$ \$ \$ \</del>	69.46 Horizon	tal Angle= 323.1	e e e e e e e e e e e e e e e e e e e
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	arian da		E
	مارند در منطق المارند الماريدي المنطق المواد المواد . المارند المنطقة المارند المارندي المنطقة المواد	• • • • • • • • • • • • • • • • • • •	CD'.
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			TO ARREST ON THE STATE OF ARREST ARREST OF THE STATE OF T
SH FIME CHE AND DEAL AND	1 1 1	i i i	71.15
CH TIME CUR AMP PEAK AM 5 58.36mS 33.59 g/s 34.37 g		2ND INT TIME BASE 256mS	EXP   1
6 58.36mS 27.34 g's 33.59 g		256mS	1
7 58.36mS -25.78 g's -27.34 g	's -51.31 In/s	256mS	1
8 58.36mS 50 g's 50 g's	102.6 In/s	256mS	1

## Remarks

High Explosive Anti-Armor Rocket Shipping and Storage Container (CNS-48) EN Fed-Std-101. Method 5007. Free Fall Drob Yest, Procedure 3. Brop Height 18 In. Amb. Temperature, Corner 3-4-5, Lower Fort Accelerometer: Sh  $\beta$  - Long, Sh  $\beta$  - Vert, Sh  $\beta$  - Trans. Sh  $\beta$  - Resultant, Filtered LP 290 Hz -3db.

# Waveform Test Report AFPEA: HO AFLC/DSTZ, TRIAD II-E

Test Ident:	AF PACKAGING IN	AL ARENOS	Date	of Test: 0	-7-10-19¤
Teasurement	Constants:		<u>.</u>		<u> </u>
Transputen D. Vat Onnegral Ing Onnegral	Basism	Tograda Mari	1	E./Z # >E.E ZEz,4 1	Even a di Deve I
The second secon	Vertical Angles	76 ::6	Horizontal An	gle= 312.5	a company of the comp
The control of the co	± *	of sam <u>u</u> on	·		1
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	a parametris de la companya de la c	يد برياده مستخبل والراد		one or recovery of the second	
The second secon		i v Solovija se			1
Regults			<u> </u>		
1 11 25m3	CUR AMP PEAK A 9.375 g/s 15.62	g s 14.21	ln/s	256m5	EXP 1
	26.56 g's 36.71 -28.90 g's -28.90			256mS 256mS	1
4 11.26mS	39.86 g/s 39.86	g's 77.29	In/s	256mS	1

### Remarks

High Explosure Anti Arror Rocket Chicolog and Storage Tontainer (1984-48) Exposedure 3. Shop Method 5007, Free Fall Drop Test, Procedure 3. Shop Method 18 In. Amb. Temperature. Content 1845, Locen Standboard Accelerometer: Chiliniert, Chiliniert,

## Waveform Test Report AFPEAL HO AFLC/DBTZ, TRIAD II-E

Test Ident:	AF	PACKAGING	EVAL	AGENCY	Date :	Ģ≠	Test:	-07-10-1°°
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Measurement Constants:	- # -	<u>It a c</u>	<u> </u>	<u> </u>
Transpuser Dutous 188 Integral Boaler Ond Integral Boaler	∑745 € V615 73844 1	51/4; s vil 78:44 1	: 51/g akkilt 386/4 1	I. ; a kol: TB±.2 I
Vertical fing	rle= 151.8	Horizontal	Angle= 128.7	The case of parties of the same of the sam
	er ja vieter <sub>er</sub> <u>– meremen er j</u> e Per	استان درای استان او این درای هم درای هم درای استان در استان در استان درای هم در استان در استان در استان در است		(2)
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a a a a - I	<u> </u>	· · · <u> </u>		ð   
CH TIME CUR AMP FE 5 59.39m3 -38.28 g s -39	.06 g's -84.39	9 In/s	<b>256m</b> S	E EXP
6 59.39mS -20.31 g's -20 7 59.39mS 25 g's 41	.40 g's 81.30	8 In/s	256mS 256mS	1
8 59.39mS 48.43 g's 50	g's 100.	4 ln/s	256mS	1

### Remarks

High Explosive Anti-Armor Rocket Shipping and Storage Contained (N.-42) I., Feb-Sto-101. Method S107. Tree Fall Ordo Test. Procedure 3, Ordo Height 18 in. Amb. Temperature. Conner 1-1-5. Lower Port Accelerometer: 135 E - Long. 25 5 - Vert. C5 7 - Trans. In 8 - Resultant, Filtered LP 296 Hz -7 d5.

## Waveform Test Report AFPEA, HO AFLONDETZ, TRIAD II-E

Test Ident: AF FACHASING ITML -3841 Date of Test: 25-19-1992 resaurement Corstarii Transione Cuto วง วารัฐกัน คือสมภั De Denied Base : : 14 TIME ренк ныь TIME BASE FUR AMP 157 INT 256m5 19.24m3 -24 21 g/s -25 g/s --- -25.96 ln/s 3 19.24mS -27.34 g's -35.93 g's -70.17 In/s 256mS 256mS 3 10.24m5 35.93 g's 36.71 g's 44.20 In/s 256mS  $10.24 \text{m} \odot 50 \text{ g/s}$  50.78 g/s 76.66 ln/s

#### Pemarks

High Explosive Anti-A sur Rocket Bhissing and Stonage Container (CNU-480-21). Fed-Std-101, Method 5007, Pree Pall Cros Test. Procedure 3. Shop Height 18 in. Abu. Temperature. Conner 1-2-5. Cook Espectant Accelerometer: Chil Hillert. Chil - Long. Chil - Trans. Chil - Resultant. Filtered of CPO Ha -1 db.

## Waveform Test Report AFPEA, HQ AFLC/DBTZ, TPIAD II-E

Test Ident:	AF FACHAGING ET	VAL AGENCY	Date	of Test:	07-10-1990
Maasurement	Constants:	<u> </u>			<u> </u>
Thananile Sac Shrei - She Shreinki	Etalar	Ivg € viit Stev4	5 (4) 8 (40)7 58644	Elve a vi Teix- I	E vg a clt 18874 1
7	Ventical Angle=	171 9 H	onizonyal fa	gle= 63.36	
					C.F.1
***		ومستر ومستحد المرادي	···	معيدهما والروارة	0
		***** <u>-</u> ***-		e e e e e e e e e e e e e e e e e e e	
	en e	an State of State of the State	in the second of	. ************************************	(1)
- 1.11			<u> </u>	<u> </u>	
THE THE	CUR AMP PEAK A				
5 54mS 6 54mS	-33.59  g/s -34.37			2 <b>56m</b> 3	*
6	14.84 g's 14.84	-		256mS 256mS	<u> </u>
9 64mS	5.468 g's -17.96	<del>-</del>		გენ <b>ო</b> ე 256 <b>ო</b> ნ	
כמדם נ	36.71 g's 36.71	g s 163,3 (	W 3	radma	1 1

#### Remarks

High E plastice Anti-Arica Rocket Bhicolag and Storage Container (CAL 43) Ex. Fed-Btd-101. Met up CT 7. Free Fall Chip Test. Procedure 3. Onto Height 13 In. And. Temperature. Forward End Page 5. Lower Port Accelerateter: CT 5 H Long. CD 5 H vert. CD 7 H Thans. On 3 H Resultant. Filtered LF 270 Hz HI co.

# Waveform Test Report AFFEA; HQ AFLC/DSTZ, TRIAD II-E

essurement Don	scant <b>:</b>		*	<u> </u>	
Transpuden Judoud en Indagna (604/4) Ind Indagna, 604/4)			Elitik Elit TEbuk E	fluir e vill Tirke	
ų V	ectical Gayle=	And the second s	อกเธอหายไปใก	ngle= 181 6	
	4	جد المعاد معاده ال		e jednosta aktivi	1
			arera reservice service que		
	energia ( <mark>4</mark> ) Harris de la Carlo (1994)	Typin Towns		1 <u></u>	C C C C C C C C C C C C C C C C C C C
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			<del>- Time - y - Ingala</del> yaa kuna e	ne negative services and services are services and services are services and services are services and services and services are services are services and services are services are services are services and services are servic	+
24 CIAE CLA	ene feak e	<u> </u>	i i i i i i i i i i i i i i i i i i i	T TIME BASE	EXP
	62 g/c 14.96 34 g/s -27.34	g s 2.473	In/s	256mS 256mS	•

#### Remarks

High Evalosive Anti-Ak U Rocket Phicolog and Stonage Container. CNU-480/Ev. Red-840-101. Method 5007. Free Fall Chop Test. Procedure 3. Chop Height 18 In. Amb. Temperature. Forward End Page 5. Jopen Standbard Accelerateters. Chilin vent. On Z - Long, Chilin Times. Chilin Fesultant, Filtered LF 290 Hz -7 Mb.

256mS

256mS

12 8m3 -.78t2 g's -12.5 g's -17.80 In/s

12.9m3 | 26.56 g/s | 26.56 g/s | 70.79 Invs

## Waveform Test Report AFPEA: HO AFLC/DSTZ, TRIAD II-E

Test Ident:	AF FACKAGING	EVAL AGENC	í Dat	e of Test:	0 <b>3-10-19</b> 90
Measurement	Constants:	<u> </u>	<u> </u>	<u>:- ;                                   </u>	
Transcupan D Lat Integral Ing Integral	91918°	Elvg a cos Sev4 S	5 (1 % vil) 18574 1	1 vg a cut 18894 V	Eligna velt Eleva E
1. 1811.) 1. 1811.) 1. 1811.)	Vertical dingle	eller og forske en sen		nga ay ganta dingga a <del>y </del> a	. L.C.1
			<u></u>	er johnson	· · · · · · · · · · · · · · · · · · ·
				region e en la como	35
56.83mS 7 56.83mS	CUR AMP PEAK -3.906 g/s 25.7 99.21 g/s 100 4.687 g/s 19.5 97.65 g/s 99.2	8 g's -23.89 g's 110.6 3 g's 37.71	in/s In/s In/s	MT TIME BAS 256mS 256mS 256mS 256mS	E EXP

## Remarks

High E closive Anti-Armor Rocket Shipping and Storage Container (CNU-480/E). Ted-Std-101. Metabo S//T. Tree Fall Drop Test, Procedure S. Crop Height 18 In. Amb. Temperature, Bottom Pace J. Lower Fort Accelerometer: Ch 5 - Long. Ch 5 Jent. Ch 7 - Trans. Ch 3 - Resultant. Filtered LP 290 Hz -3 db.

# Waveform Test Report

Test Ident:	AF FACTOR	NG EVAL	AGENC'	,	Date	of Test:	03-10-199
Measurement	Constants:		: !	<u>: - : - : - : - : - : - : - : - : - : -</u>	-	ş -	
Transcicer Co Ost Orbegnal Onc Orbegnal	Boslar	j v Ver	1 5 × 1. T	51.49 396.4 1	31.515 :	574¢ s 4215 75544 1	Elipie pub Tepu4 I
In contraction the contraction of the contraction o	Vertical f	Angle: S.	<b>1</b> 73	ia <b>ríz</b> o:	ntal Ang	le= 127.9	1 April 1 Apri
The property of the property o		garanta da santa da s		<del></del>	والمعل والمساوات الاستعام		A CONTRACTOR OF THE PROPERTY O
1	CUR AMP 57.93 g s -5.468 g s	57.03 g's 25 g's	136.9 14.52	ln/s ln/s	SMD INT	IIME BAS 256mS 256mS	1
1	7.031 g's 57.81 g's					256mS 256mS	1

### Remarks

High Explosive Anti-Arnor Rocket Emissing and Storage Container CNU-480/E:, Fed-Std-1 1, Method 3007, Free Pail Grob Test, Procedure 3, Onto Height 18 In, Amb. Temperature, Bottom Face 3, Occer Stanboard Accelerometer: Chilin Vent. Chil - Long, Chilin Trans, Chilin Resultant, Filtered LF 270 Hz -3 db.

Old Style SMAW Wood Container, Fed-Std-101, Method 5007.1, Free Fall Drop Test, 6.3, Procedure G, Ambient Temperature, 18 Inch Drop Height,

Container Orientation Accelerometer	Filtered		Peak Acceleration 25 Hz Fil	eration Filtered	ered 290	HZ
	Vert Gp	Trans Gp	Long Gp	Vert Gp	שט	Long Gp
Bottom(3)						
Lower Port	34.8	•	•	41.0	30.5	21.1
Upper Starboard Port Side(2)	37.9	3.1	8.6	46.5	4.3	10.2
Lower Port	4.3	36.7	9.9	9.8	4	14.1
Upper Starboard	24.2	28.5	9.9	28.1	32.8	12.5
Corner 2-3-6						
Lower Port	1	20.3	32.0			
Upper Starboard	20.3	14.1	27.3			
Corner 1-4-5						
Lower Port	10.2	13.3	•		14.8	27.3
Upper Starboard	21.9	10.2	21.1	5		24.2
Top(1)						
Lower Port	39.0	13.3	9.0	43.0	ю Ю	
Upper Starboard	57.8	22.7	16.4	66.4	37.5	28.1
Corner 3-4-6						
Lower Port	10.9	14.1				
Upper Starboard	7.0	9.4	25.8			
Corner 1-2-5						
Lower Port	18.8	· ∞				
Upper Starboard	22.6	19.5	30.5			
Forward End(5)						
Lower Port	2.7	2.3				
Upper Starboard	9.9	1.6	15.2			